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Communication and Interpretive Visitor Services in Protected Areas of Northern Thailand: an Evaluation and Assessment

by

Christopher Charles Fisher

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of Master of Science

in Protected Areas and Wildlands Management

Department of Renewable Resources

Edmonton, Alberta

Spring 1999

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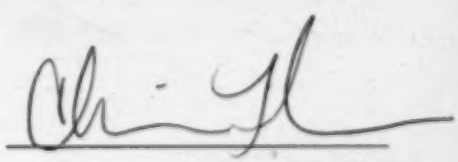

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Jan 27, 1999.

Quote Page

"Give them knowledge, and they will conserve with their mind and their conscience."

Vallobh Sukont, former Superintendent KYNP, Thailand.

"National parks can teach people to look at nature as something sacred. By teaching people to appreciate the beauty of nature, national parks can be considered shrines where people can worship nature, meditate, find peace of mind, and draw inspiration."

Dr. Boonsong Lekagul (1962).

University of Alberta

Faculty of Graduate Studies and Research

The undersigned certify that they have read, and recommend to the faculty of Graduate Studies and Research for acceptance, a thesis entitled Communication and Interpretive Visitor Services in Protected Areas of Northern Thailand: an Evaluation and Assessment submitted by Christopher Charles Fisher in partial fulfillment of the requirements for the degree of Master of Science in Protected Areas and Wildlands Management.

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Abstract

This study determined that a wide variety of interpretive services exist in protected areas of northern Thailand. These serve as models of excellence for south-east Asia, and other developing countries the world over, and therefore an assessment of their effectiveness is valuable. Almost all visitors (92.66%) to protected areas, indicated that gaining knowledge was very important, but only 19% indicated that the existing facilities contributed to a better understanding of the site. Typically, only 35% of persons exiting the summit visitor center in Doi Inthanon National Park, could relate specific exhibit-based information. Persons who spent more time in the center related more effectively this information. Perception of professionals lend support to experimental studies.

Visitors and professionals made recommendations to improve interpretive facilities. This study concludes that services proven effective elsewhere should be culturally sensitized so that they will be better received by the public, and continue to contribute to the high standards of interpretive programs and facilities in northern Thailand.

Acknowledgments

It goes without saying that work of this nature must proceed with the considerable assistance of others and in the case of this thesis the team which I was fortunate to have assembled, contributed immeasurably to every aspect of this project. The following words are but a small payment for this great debt.

Dr. Jim Butler, demonstrated early on in our relationship, a trust and confidence in my abilities, which grew in time through his gentle mentorship. Words alone cannot convey my appreciation, so I will leave my future actions to speak of his influence and professional development. I wish to also thank my committee members, Dr. Guy Swinnerton and Dr. Dhara Gill. Dr. Gill was especially helpful through the early stages of this work, as the Director of the CIDA project, he made this project possible, and served as a model leader for international academic exchanges. Mr. Ian Sheldon, my research partner and friend, was uncompromisingly organized and professional throughout our stay in Thailand, and without whom I would not have achieved nearly as much professional and personal growth. Drs. Glen Hvenegaard and Ross Chapman helped in the early stages of this project by grounding us on our research methods and providing insights to research in Thailand.

In Thailand, everyone we met assisted in some capacity, whether it being directed towards the project, or facilitating cultural acclimatization. In particular, I would like to thank Dr. Songvut Phetpradap for ensuring that our stay in Thailand was well coordinated. Dr. Thep Phongparnich and Dr. Numchai Thanupon served as coordinators for our research and facilitated the process of travel and professional contacts. Rawee Hanpechern began our appreciation of Thailand and its people while here in Canada, and continued once we arrived to be a gracious host. Diana Jantakad somehow managed to keep 'the boys' one step ahead of all the administrative labyrinth, and did so with an infectious smile.

Narupon Lerdkanjanaporn, Danai Winairat, Weerapong Deelert, Visanurot Choosri, Kanungnit Meraksa, and Nakorn Klalin helped us understand some aspects of Thai culture through their friendship. I will always value the time spent with The Numster and Mr. Danai, for they became more than ever could of been hoped, as our translators and friends.

Financial support for this project was through the CIDA funded Institutional Linkage between the University of Alberta and Maejo University, and additional funding in the form of a Graduate Assistantship from FGSR, helped me through my program.

I would like to thank my parents, Gerard and Lea Fisher, who provided through their love, a chance to make the most of my opportunities. They were and will always be with me wherever I travel. Finally, I would like to thank my fiancé Carole Patterson, who showed patient confidence in my abilities, and supported me through the long, long, long process of this program.

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List of Abbreviations

CM: Chiang Mai

DINP: Doi Inthanon National Park

DKNP: Doi Khuntang National Park

DSNP: Doi Suthep-Pui National Park

EE: Environmental Education

ERDC: Environmental Education, Recreation and Development Extention Center

JSNP: Jae Sorn National Park

KSNP: Khao Sok National Park

KYNP: Khao Yai National Park

MSNP: Mae Suring National Park

NPS: National Park Service

OLNP: Ob Luang National Park

RFD: Royal Forestry Department

SLNP: Sri Lanna National Park

TL: Tham Lod

TP: Tham Pla

VC: Visitor Center

USPC: United States Peace Corps

Chapter 1

Background to Interpretation, and

Introduction to the Research Inquiry

1.1 Introduction to Interpretation

Interpretation is a form of specialized communication. Whether an interpreter is translating language or complex thoughts and principles, the process of interpretation aims to relate concepts in an informative and entertaining fashion so that they can be more easily understood by the intended audience. Quality nature interpretation is an educational and recreation tool that is directed to visitors to protected areas throughout the world. The communication and presentation of interpretive information in Thailand has been recognized as not fulfilling the needs of the visitor (Elliott and Beaver 1992, Elliott 1993, Brockelman and Dearden 1990, Griffin 1994). Consequently a brief explanation of the definitions, concepts, principles and approaches to quality interpretation seems appropriate. These elements of successful interpretation may be not fully understood by managers, visitors and students of protected areas management.

1.1.1 Definition of Interpretation

The origins of interpretation began in Western countries, and in the United States in particular. Freeman Tilden, a professional interpreter with the National Parks Service (NPS) in the United States was the first to describe the interpretive process in his classic book Interpreting our Heritage in 1957. In it, Tilden defines interpretation as:

> *"An educational activity which aims to reveal meaning and relationships through the use of original objects, by firsthand experience, and by illustrative media, rather than simply to communicate factual information."*

This definition provides a foundation upon which the meaning and purposes of interpretation have been expanded upon in further definitions. The definition developed by

Butler (1993) expands Tilden's definition by including additional details of the process and audience.

1. It is *on-site*, emphasizing *first-hand experience* with the resource.
2. It is an *informal* form of education.
3. It deals with a *voluntary, non-captive audience* who participate by their own free choice during their leisure time.
4. Participants normally have an *expectation of gratification.*
5. It is *inspirational* and *motivational* in nature, not just the presentation of factual information.
6. *Shifts in attitude, expansion of knowledge,* and *alteration in behaviour* are its goals.
7. It is an *extrinsic* activity, which is based upon *intrinsic* values and is intended to facilitate an appreciation, understanding and eventually the protection of those intrinsic values.

This expanded definition of interpretation focuses not only in the process but also in its revelation, inspiration and objectives. Effective interpretation ultimately strives for a attitudinal and behavioural shift, which are founded upon a realization of intrinsic values. When interpretation is effectively presented its objectives benefit both the visitor, and protected areas managers.

Interpretation differs from structured instruction, such as in a classroom, in that concepts are communicated - not taught factually. The audience is participating willingly and therefore shares different motivations from captive audiences. Persons participating in interpretive programs and facilities do so for fun, interest, self-improvement, and entertainment, rather than for grades, advancement, and money (Ham 1992). Interpretation is regarded as one of the most effective methods of conveying, to the public, the management themes of protected areas and of fostering an understanding which ultimately leads to an increased conservation ethic.

1.1.2 Types of Interpretation

In response to the wide variety of opportunities present in protected areas to communicate with visitors, there have been many types of interpretive services developed. All these types of interpretation, strive to attract the attention of the visitor and convey the

message in an appealing and effective manner. Techniques used for this purpose are varied, and are only limited by the interpreter's imagination.

Figure 1.1: Types of interpretive media.

- **Personal Services**
  - Informational duties
    - Center Attendant
  - Presentation duties
    - Scheduled services
      - guided tours
      - slide shows
      - prop talks
      - campfire programs / Theatrical
    - Point Duty (Roving duty)
    - Impromptu Events
    - Living interpretation
    - Demonstrations
    - Skill Instruction
    - Extension programs
      - schools
      - TV and radio
      - Environmental Education
        - School field trips to parks
        - Education Kits

- **Non-Personal Services**
  - Visitor Center
  - Exhibits/ Signs
  - Interpretive Trails
  - Interpretive Publications
  - Animation
  - Automatic A/V
  - Radio
  - Interactive CD roms

(adapted from: Butler 1993, Foley 1978)

Types of interpretive services can be divided into two main groups: Personal and Non-Personal services (Table 1.1). Personal services involve the public's interaction with an interpreter, through a program or an impromptu event. Non-personal services involve a reliance on signs, visitor centers, exhibits, brochures, and other media to communicate with the visitors. These interpretive facilities and services are frequently at their most effective in specific settings. By learning the context in which facilities and services can

maximize their effectiveness, the objectives of a protected area's interpretive plan can be fully realized.

1.1.3 History of Interpretation

People have been leading walks into nature and interpreting the environment in some sense, in all written history. The professional practice of nature interpretation, however was not fully developed until protected areas were created to provide a context for the sharing of nature with the public. National Parks were first created in 1872, and by the early 1900s, many of the national parks had nature guides which led tours and provided campfire programs for visitors (Sharpe 1976). John Muir, David Galletly and Enos Mills were guiding visitors in Yosemite, Banff and Rocky Mountain national parks around the turn of the century (Sharpe 1976, Butler 1993). These activities forged the tradition of interpretation in protected areas, but were not initially officially endorsed or implemented by any structured protected area organization. These early programs were mainly operated by private concessionaires or individuals, who responded to the public's demand for an informative component to their travels.

The first formalized interpretive events in protected areas occurred in the United States. Steven Mather, director of NPS, experienced a scheduled interpretive event at the Fallen Leaf Lodge at Lake Tahoe, in 1919 (Sharpe 1976). So struck was he by the enthusiasm of the large crowd gathered around the two interpreters, he made plans that very trip to transfer this type of program to Yosemite National Park for the following summer. Mather hired the two interpreters from the lodge, as seasonal guides at Yosemite national park, and this event initiated agency-supported interpretive programs.

In reaction to the popularity of these interpretive events, protected area managers elsewhere, soon began to guide tourists, give talks, and attend exhibits, and agencies began to design and build visitor centers, interpretive signs, and nature trails. By the 1930's interpretive events had expanded to many state, provincial and federal parks in North America and the process of the interpretive event was evolving

(Sharpe 1976). Since that time, standard methods and techniques have been developed and shared within and among agencies, and the interpretive process continually evolves in pace with society's awareness and with technological advances. Whatever strategies are used to share the message, the fundamental objectives and benefits involved through effective interpretation remains little changed from its foundation.

1.1.4 Objectives and benefits of Interpretation

Although interpretive events are widespread throughout most of the world's protected areas, what these events bring to the visitor and the management of parks are often misunderstood. As interpretation is a form of informal education, visitors often do not consciously realize that they are being influenced by programming and facilities. Because of this subtle realization visitors and managers who have not studied the programs often do not realize the benefits that arise through successful programs.

The benefits of interpretation extend both to the visitor (Table 1.2) and to the management (Table 1.3) of protected areas. In this view, interpretation is not seen as an economic liability to protected areas managers, rather concise and effective interpretive services complement management objectives in protected areas.

While the effect of interpretation towards management is a vital element of interpretation, this study is limited to the impact of interpretation to park visitors. Visitor behaviours that are altered by interpretive facilities and services logically facilitate the promotion of protected area objectives.

1.2 Background to this Study

Dr. James Butler visited Maejo University and other parts of Thailand from August 30 - September 14 1996, to contribute within his field of expertise, particularly towards ecotourism development and nature interpretation. He also

Figure 1.2: The benefits of interpretation to the visitor.

1. To provide an orientation and information service to visitors in such a way as to minimize uncertainty and to maximize opportunity for a diverse range of users of varying levels of age, interest, physical capabilities, and previous cultural exposure.

2. Interpretation makes visitors aware of their place in the total environment and gives them a better understanding of the complexities of coexisting with that environment.

3. Interpretation may broaden the visitor's horizons beyond the park or forest boundary, giving a greater understanding of the total natural resources picture.

4. Interpretation informs the public and an informed public may make wiser decisions on matters related to natural resource management.

5. Interpretation may instill in visitors a sense of pride in their country or in the region's culture and heritage.

(adapted from: Sharpe 1976, Butler 1993)

Figure 1.3: The benefits of Interpretation to Protected Areas Management.

1. Interpretation may reduce enforcement problems, litter, and the unnecessary destruction of park property, resulting in lower maintenance and replacement costs.

2. Interpretation provides a means of visitor dispersal, away from sensitive and high traffic areas, thus protecting the environment.

3. Interpretation is a way to improve public image and establish public support.

4. Interpretation may assist in the successful promotion of parks where tourism is essential to an area's or country's economy.

5. Interpretation may be effective in preserving a significant historic or natural area by arousing citizen concern.

6. Interpretation may motivate the public to take action to protect their environment in a sensible and logical way.

7. Interpretation provides communication skills for employees, community residents, and volunteers.

8. Interpretation demonstrate by example the agency's and nation's philosophy and beliefs about conservation, wildlife protection, environmental preservation, and the innate value of its natural and cultural heritage.

(adapted from: Sharpe 1976, Butler 1993)

served as keynote speaker at an national symposium "Ecotourism for this Decade", addressing the economics, conservation and social benefits of ecotourism, and to formulate an assessment of potential exchanges to strengthen the institutional linkage between Maejo University and the University of Alberta. Dr. Butler visited eleven different field sites noted to be tourism attractions (including four national parks) and concluded that the region would benefit greatly from an integrated ecotourism and interpretive plan.

1.3 Purpose of Research

1.3.1 An Applied Study

This study is intended to be a practical and applied analysis of the existing interpretive facilities and programs in protected areas of northern Thailand. This research was conducted in conjunction with Ian Sheldon's work on determining the potential for ecotourism in northern Thailand. Both studies which were undertaken simultaneously, are intended to serve the managers of the protected areas investigated, and be useful to students in protected areas management curriculum. As a result of this approach, this thesis is structured so that academic and non-academics alike can gain both theoretical insight towards the process of interpretation, and resolve which existing approaches are most effective. The purpose of this study is to assess the state of the interpretive services, evaluate them through independent and tourist-based means, and to recognize how and where services can be improved. It is hoped that this project will foster an advancement in the communication strategies of natural features in the region, and serve as a model of excellence for Thailand, ultimately leading to the conservation of wilderness areas.

Previous research conducted in the region of northern Thailand suggests that nature-based tourism remains largely undeveloped (Dearden, 1991), and that services provided to facilitate wildlife viewing, and information sharing have as yet to be fully realized (Elliott and Beaver 1991; NREP and HIID 1995). Griffin (1994) has suggested

that interpretation, as a management tool in Thailand, is largely not recognized by park officials, and indicated that visitors learn little during their visit to protected areas.

1.3.2 Limitations of this Study

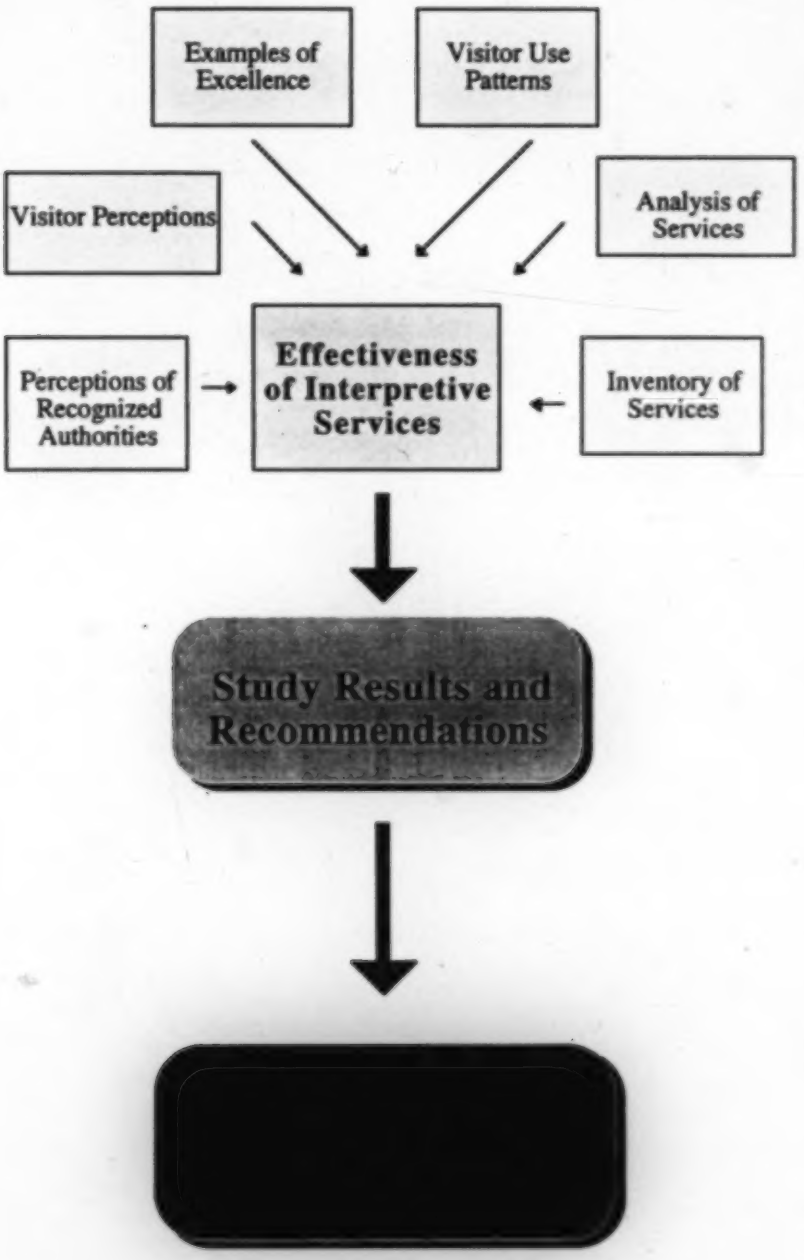
As a result of the applied nature of this study, and the context in which the research is being conducted, there are several limitations which need to be recognized. As a Canadian researcher entering into a foreign country in which I have little knowledge of the complexities of the cultural and social order, my research questions and analysis reveal Western influences. As much as possible cultural values and traits which are thought to influence the research question were identified previous to the field investigations, however it was impossible during the period of this study to gain a full appreciation of the motivations which influence the behaviour and system of beliefs of Thai people or other visiting nationalities. The fact that both Ian Sheldon and I were foreigners also influenced the manner in which Thai tourists and managers alike responded to our inquiries. The portraits which were described by persons questions, were influenced by our gender, nationality, and academic positions in some capacity. The extent of this is not known as we did not conduct before and after visits with those interviewed using Thai researchers to establish a normative response. The translation process provided another source of limitation to this study. Translators were brief in their discussions with us as well as those being questioned, and they may have given us the answers they thought we wanted, even though they may not have been explicitly stated in the answer. Finally, the broad question which was being investigated provided limitations to this study. As the resolution of this applied work was dependent on various factors such as visitor behaviours, attitudes, professional perceptions, and basic inventories, the analysis was multifaceted and open to various interpretations.

1.4 Objectives of this Study

- To assess visitor perceptions towards various themes, facilities and services in northern Thailand's protected areas.
- To assess and evaluate the use patterns of interpretive facilities by examining the visitors behavioural patterns.
- To assess the effectiveness of chosen interpretive media through the use of established criteria.
- To assess the existing interpretive services in northern Thailand, through discussions and interviews with professionals with interest in interpretation and protected areas management.
- To evaluate and recognize examples of excellence in private initiative interpretive services and programs.
- To propose preferred methods of design and programming in order to improve visitor communication and to enhance the quality of the visitor's experience.

Since interpretation is at its most basic level a form of communication, it must follow the components of communication. In order for communication to be successful the message must proceed from a sender to a receiver, where upon a form a feedback is returned to the sender. This study strives to measure some feedback from the interpretive communications programs which exist in northern Thailand.

Figure 1.4: Objectives of the Study.



1.5 Research Propositions

Thailand is recognized as a leader in protected areas management in south-east Asia, and throughout developing countries the world over. As a result of their leadership in this field, it is noteworthy to examine the way in which the communication strategies have evolved and are being practiced in protected areas. This study intends to evaluate the following propositions.

1. Communication and interpretive services are widespread in protected areas in Thailand. In spite of their occurrence, many of these facilities are not being utilized to their full potential by park users.
2. Standards of quality in interpretive services are variable. Services noted for their effectiveness may serve as examples of excellence, for they incorporate specific strategies and techniques.
3. Use patterns differ between foreign and local visitors, and nature oriented and general users of interpretive services in Thailand. Previous exposure to the usefulness of these services may contribute to these differences, as well as the information and methods in which the services communicate with visitors.
4. Standard 'western-based' approaches to communications have been largely adopted by managers in Thailand. These may not be as effective to Thai visitors, as towards foreign users, who may have more experience with these standards.

1.6 Organization of the Thesis

This thesis unfolds in 10 remaining chapters.

Chapter 2 reviews the six theoretical premises which underlie the principles involved in the formulation of this research. Chapter 3 explores the protected areas and environmental context of Thailand, to better understand the historic and traditional uses and

philosophical relations to wilderness. The research component of the thesis is presented in the next five chapters.

Chapter 4 presents an inventory of the interpretive services available in the protected areas in which the research was conducted. Chapter 5 examines the perception of both Thai and foreign visitors to interpretation and existing services in protected areas. Chapter 6 explores the perception of professionals and those working in protected areas towards the evolving role of interpretation. Chapter 7 examines and assesses the effectiveness of existing interpretive services through established and measured techniques to determine their readability and effectiveness. The next two chapters explore the use and effectiveness of interpretation by visitors. This work was conducted as a case study in DINP. Chapter 8 looks at the behaviour of visitors, and their usage of selected services. Chapter 9 determines the effectiveness of the interpretive messages in visitor center exhibits, by studying visitor response rates. Chapter 10 explores examples of interpretive excellence, discovered both in protected areas and in private initiatives, and illustrates practical techniques which have demonstrated success. The final chapter provides a summary of the results obtained, and provides recommendations, to contribute to the expansion of quality communication and interpretive services in Thailand.

Chapter 2

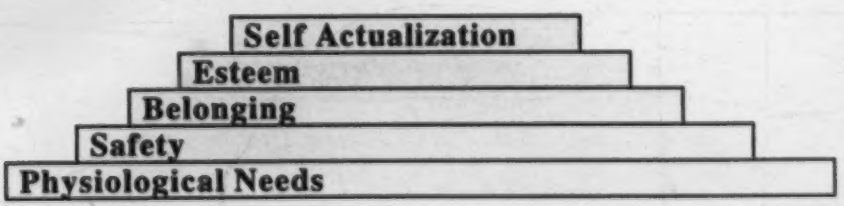
The Theoretical Foundations of this Study

This study is founded upon theoretical premises from a variety of disciplines. Six underlying premises, fundamental in the analysis and understanding of interpretive services and communication strategies in Thailand are reviewed in this chapter. These premises have been recognized, through the review of case studies, literature, and the communication with recognized experts in this field. These established theoretical principles, serve as the foundation upon which this research is based.

2.1 Development of Interpretive Learning

Interpretation may be used as a management tool which can have considerable impacts upon visitors with a variety of personal experiences and values systems. Butler (1980) suggests that in its most elaborate form, interpretation deals with individuals near or at the top of Maslow's (1954) Hierarchy of Needs (Fig 2.1). To reach the upper level of self actualization, which would include behavioural modification and concepts such as preservation, the lower levels must initially be satisfied. For interpretation to be effective, the park atmosphere must provide to visitors a reasonable foundation upon which their levels of safety, belonging, and esteem can be realized. Although interpretation can function at all levels in Maslow's Hierarchy, interpretation at the Self-Actualization level is the most profound, meaningful and effective (Butler 1980).

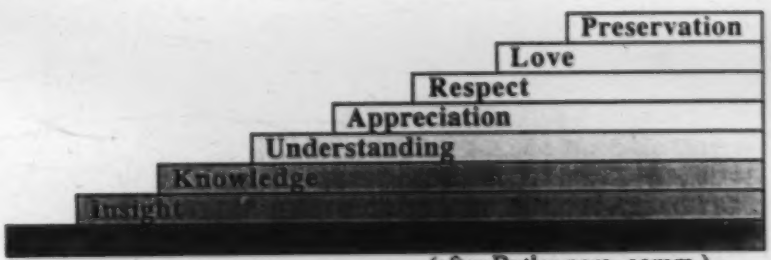
Figure 2.1: Maslow's Hierarchy of Needs (1954).



In the United States, the National Park Service has realized that the interpretive process mirrors Maslow's hierarchy of need, in the design of their continuum for effective interpretation. The NPS (1997) views three stages in the interpretive process: Understanding, Appreciation, and Protection. Like Maslow, it is necessary to fulfill levels in an incremental basis. It echoes Maslows' table in that it's founded by basic principles that become increasingly intrinsic, and behaviourally motivated.

Butler (pers.comm.) postulated the General Model of Interpretation-Protection Interface (Figure 2.2), by expanding the three stages in the NPS interpretive continuum, to eight levels. Interpretive plans in protected areas are most effective when they can impact all visitors along the Interpretation-Protection interface continuum, offering challenging and inspiring programming at each subsequent level (ibid.).

Figure 2.2: General Model of the Interpretation-Protection Interface.



(after Butler pers. comm.)

In accordance with this sequential stage approach to visitors attitudes and experiences, Veverka (1994) has developed a Visitor Perception and Behavioural Objective change strategy (Figure 2.3), which follows through on the General Model of the Interpretation-Protection Interface. The ultimate realization of Behaviour Change corresponds with respect, love, and preservation levels in the General model of the Interpretation-Protection Interface. In order to achieve the Self Actualization goals of Preservation and Protection, the individual must attain a state of Behavioural Change. This level is only accomplished when it is preceded by an Emotional Objective, that creates a

willingness to change, and a Learning Objective which identifies and generates a state of awareness to the visitor (Figure 2.3) (Veverka 1994). Through this model, it becomes clear that interpretive efforts hoping to support the public's growth from awareness and understanding to preservation and protection, must at various levels target learning, emotional, and behavioural objectives of protected area visitors.

Figure 2.3: Visitor perception and behavioural objective change strategy.

Behavioural Change	**(Behavioural Objective)**
Motivated to Change Behaviour	**(Emotional Objective)**

(Veverka 1994)

2.2 Principles and concepts of effective interpretation.

Effective interpretation programs are often poorly understood by visitors and managers unfamiliar with the process of interpretation (Ham et al. 1993). Basic principles have been developed which lead to effective communication with the public, while have proven effective in many situations and with few exceptions are generally effective across cultural boundaries. Freeman Tilden (1957) was the first to present principles of interpretation, which have since have been expanded upon by Cherem (1977) (Table 2.4).

The interpretive principles are effective because public audiences generally share universal characteristics that predispose them to learning. These characteristics, once understood, can be used to increase the effectiveness of interpretive messages in quality personal and non-personal communication strategies (Cherem 1977). The realization of these concepts facilitates the development, implementation and evaluation of effective informal communication with the public (Figure 2.5 and 2.6) (Veverka 1994).

Figure 2.4: Characteristics of effective interpretation.

1. Provoke the curiosity of the audience.
2. Relate to the everyday lives of the audience.
3. Reveal the essence of the subject through a unique viewpoint.
4. Address the whole; that is, show the logical significance of an object to a higher level concept or story line.
5. Strive for message unity or a theme; that is, use a sufficient but varied repetition of cues to create and accentuate a particular mood, theme, aura, or atmosphere.

Cherem (1977) after Tilden (1957) in Roggenbuck 1981.

Figure 2.5: Concepts which facilitate effective communication. (Veverka 1994).

- We all bring our pasts to the present.
- Categories can blind us.
- First impressions are especially important.
- Unless helped, we often fail to find, see, or comprehend.
- To understand the parts, we must first see the whole.
- Discovery makes learning fun.
- Meanings are in people, not words.
- Information overload causes distortion and fatigue.
- Simplicity and organization clarify messages.
- A picture can be worth a thousand words.

Figure 2.6: What visitors retain at interpretive events (Veverka 1994).

- 10% of what they hear
- 30% of what they read
- 50% of what they see
- **90% of what they do**

2.3 Maximizing Interpretive Services

The 'Fraction of Selection' (Trapp, Gross and Zimmerman 1991) is a model to reinforce activity-based interpretive programs. Trapp, Gross and Zimmerman (1991) indicated two elements which influence the public's selection of activities: Expectation of Reward and Effort Required. Their work suggests that the public is much more likely to select activities in which the Expectation of Reward, exceeds the Effort Required thus yielding a positive Fraction of Selection (Figure 2.7). If the activity is viewed as something requiring excessive effort or minimal expectation of reward, they are unlikely to participate.

Figure 2.7: Fraction of Selection formulae.

$$FS\ (High) = \frac{\text{Expectation of Reward}}{\text{Effort Required}}$$

The Fraction of Selection model is founded upon studies which evaluated the effectiveness and use of interpretive exhibits. Schleyer (1987) and Shiner and Shafer (1985) have demonstrated that a small fraction of viewers (often less than one percent) will read the entire text, even in expensive exhibits. Those persons which do tend to read most or all the text are generally already knowledgeable and interested in the topic which is being presented. These studies suggest that viewers often spend only about one third of the time required to completely read an entire exhibit. Neal (1976) has shown that the *maximum average attention span* is just 45 seconds, suggesting that many exhibits which require longer time commitment, receive little attention at all. Fazio and Gilbert (1986) have made suggestions which would maximize the effectiveness of exhibits and interpretive displays. Termed the "A,B,C's" of exhibit design: A= Attractive; B= Brief; C= Clear (Fazio and Gilbert 1986), these simple rules provide a framework with which to design and assess existing services. A good interpretive sign is one that communicates a theme to every viewer, capturing and holding a person's attention long enough for the theme to be recognized and understood (Ham 1992).

2.4 Established Evaluation Criteria for Interpretive Services

Ideally, evaluation of education programs should be done from "womb to tomb" (Jacobson 1987). Unfortunately this is often not practical, as no allowance for evaluations have been built in to interpretive plans. Too often, the evaluation of interpretive services is not even considered a part of the management plan of protected areas (Nowak 1984). The

evolution of interpretive programs relies on periodic evaluation of these events (Nowak 1984).

The evaluation of Interpretive services is important for a number of reasons. Wagar (1976), one of the first to evaluate interpretive services, suggested that effective evaluation of programs be viewed and altered independently from those persons responsible for their design and performance. Roggenbuck and Propst (1981), built on Wagar's criteria, providing five reasons for program evaluation:

1) the need for accountability
2) the need for greater support in the agency
3) the need to assess the appropriateness of objectives
4) the need to determine whether objectives are being met in a cost effective manner
5) the need to determine why objectives are or are not being met.

In a more concise manner Nowak (1984) indicates 3 ways in which evaluation contributes to interpretive programs: Program Justification; Program Evolution; Program Modification.

2.4.1 Evaluation Techniques:

Several sources were identified which contained numerous techniques with which to evaluate interpretive services and programs (Wagar 1976, Roggenbuck and Propst 1981, Nowak 1984, Medlin and Ham 1992). In this study, it was determined to implement questionnaires, observing viewing time, and behavioral measurements (Medlin and Ham 1992). All of these techniques have proven to be useful in assessing the preferences and behaviours of visitors (Nowak 1984). As the scope of this study is limited, observation and direct evaluation techniques were considered to be the most efficient in assessing the merit of an interpretive service. Direct observation is also an easily learned technique for managers to administer in the absence of trained professionals in evaluation methods (Medlin and Ham 1992).

Roggenbuck and Propst (1981) and Medlin and Ham (1992) suggest using the Flesch (1949) model to measure 'readability'. Flesch's premise is to use simplified writing so that persons reading it would read it faster, enjoy it more, understand it better, and

remember it longer. Flesch's 'Reading Ease' is a function of the average number of syllables per paragraph, the average length of the sentence (Figure 2.8) and is "the style that meets scientific tests of readability" (Flesch 1949).

Flesch (1949) also formulated another scale to determine 'Human Interest' in text. Humanized text, according to Flesch contains personal references, direction, pronouns, questions, gender, and other variables (Figure 2.9) which draws the interest of the reader enabling them to more effectively remember and comprehend the message.

Figure 2.8: Reading Ease formulae.

Reading Ease= 206.835-(0.846)S - (1.015)L (numbers are constants)
S= average number of syllables per 100 words **L**= average number of words per sentence

Figure 2.9: Human Interest formulae.

Human Interest= (3,635)W + (0.314)S (numbers are constants)
W= number of "personal words" (i.e.: you, he, she, our, people, John, wife) per 100. **S**= number of "personal sentences" (i.e.: questions, quotations, commands) per 100

The results are interpreted on a scale from 0-100. The higher the score the more effective the message. A score of less than 30 is considered poor, while greater than 80 is considered very good.

2.5 Cultural differences between Thai and Foreign persons

Sagarik (1989) presents a traditional view on how Thai people view their relationship with the natural environment. As elsewhere (Brockelman 1989, Buri 1989, Kriengkriapetch 1989, Laohavanich 1989, and Tungittiplakorn 1998), it is apparent that Thai people, hold a different relationship with the environment than persons from Western

countries. The differences arise from the cultural influences which are uniquely Thai, such as: nursery rhymes, folktales, songs, Buddhism, art, traditions, land usages, social structure and history (Siam Society 1989). These form the foundations of a child's attitude toward nature, which develop into more sophisticated beliefs in adult life (Kriengkraipetch 1989). Beliefs are predispositions to actions, which contribute to the formation of attitudes (Rokeach 1968).

Such differences in culture have been recognized as creating problems when incorporating "Western style" interpretive programs elsewhere in the world. Ham et al. (1993) has noted many problems involved when conventional Western-based approaches to interpretation are applied across cultural lines, without respecting the cultural differences. Managers of protected areas in developing countries, are often tempted to conclude that their western-based programs have failed and that "interpretation is just not for us" (Ham et al. 1993: 240). He further suggests that these managers frequently blame themselves and not the conventional Western-styled program, that they have adopted from training materials (ibid.). The result of this is a continual neglect and ineffectiveness of interpretive and communication programs in developing countries.

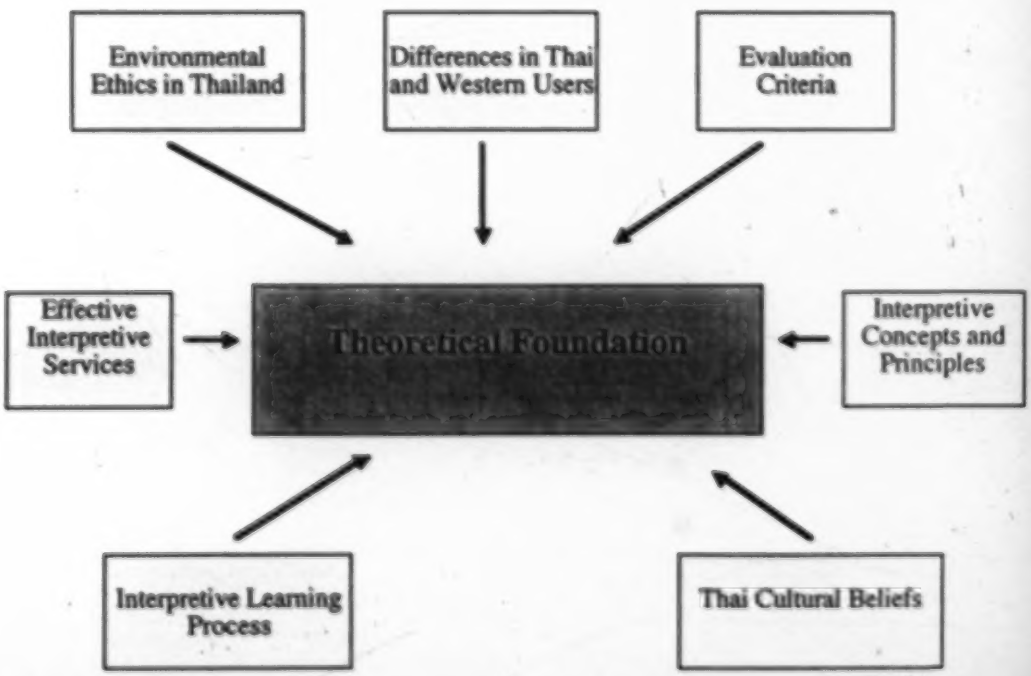
This problem may be compounded by the admiration Thai people have for technologies and processes from developed countries (Sagarik 1989). Sagarik suggests that Thai people are often quick to adopt examples from developed countries rather than home-grown initiatives, which they tend to distrust (ibid). As Western style solutions have often not been 'culturized' they can often be of far lesser value than home grown solutions.

> *"knowledge...is often packaged in the form of answers, or instructional materials, and this does not hold sufficient depth in the context of Thailand's conditions. Whether academic or cultural, ideas cannot be packaged like material goods."*
> (Sagarik 1989: 5)

2.6 Evolution of the Environmental Ethic in Thailand

Brockelman (1989) has oulined the historic process of environmental protection in Thailand, and has illustrated the various issues, motivations, and stages which have contributed to the evolution of an environmental ethic. Many of the approaches toward managing protected areas, have been facilitated by several characteristics of Thai society. Buddhism, the unquestionned respect for the monarchy, and involvent of governmental and non-governmental agencies, are discussed in Brockelman (1989) and Tungittiplakorn (1998) and account for much of the progress in protected areas management from a 'law and order' to a 'community development' approach. Many of the uniquely Thai cultural characterisitcs are discussed in further detail in Chapter 3, in terms of their relevance to protected areas management and interpretive communications strategies. Figure 2.10 outlines the various theoretical premises of this study, and how they contribute to the underlying foundation, upon which this study is built.

Figure 2.10: Theoretical Premises of this Study.



Chapter 3

The Protected Area and Environmental Context of Thailand

3.1 History and philosophy of conservation in Thailand

The history of protected areas management and interpretation in Thailand in some sense closely follows the examples established in Western countries, while in other avenues unique beliefs and cultural influences have occurred, to foster the kingdom's conservation ethic. Perhaps the first and most significant event which influenced much of the future environmental protection in Thailand occurred in 1899. At that time the control of the forests reverted to the monarchy (Brockelman 1989). In Thailand, the King holds an exceptionally high profile and an unquestioned degree of respect and admiration. Having the forested lands owned by the King, rather than private interests, likely contributed to the relative ease of land-base acquisition of protected areas which was to follow in time. The first conservationist legislation enacted in Thailand was the Wild Elephant Preservation Act in 1900, (updated in 1921), which established a conservation mandate for elephants and a few others charismatic ungulate species (Tungittiplakorn 1998). A more comprehensive law, offering various degrees of protection to a greater number of selected species was established in 1960 (Tungittiplakorn 1998). The Wildlife Reservation and Protection Act was revised in 1992 and 1994, but in spite of these laws several species of mammals and birds species have been recently become extirpated from Thailand.

Thailand's first national park, Khao Yai, was established in 1961 (Gray et al. 1994). Between 1961-1997 the Kingdom of Thailand, has created over 82 national parks, 42 wildlife sanctuaries, 38 non-hunting game reserves (Dearden and Chettamart 1997) and 16 Environmental Education, Recreation Development and Extension centers (ERDC) (Chaturasuksakul pers. comm.). Protected areas now represent over 13% of Thailand's

land base (Gray et al. 1994). This significant proportion of protected areas, owes much to His Majesty King Bhumipond, an ardent protector of Thailand's wild places. Following a series of destructive floods in the late 1980's that caused severe damage to low lying areas in the south, King Bhumipond declared commercial forestry activities outlawed (Gray et al. 1994). The King and his much respected daughter, Princess Sirinidhorn, have done much to promote conservation and the creation of protected areas throughout the kingdom. This action has managed to save many of the remaining forests in the northern regions. These protected areas were created very quickly, often without sufficient staff or scientific criteria, in the hopes of saving the country's biodiversity (Dearden and Chettamart 1997). Control of the forests by the King, facilitated a great percentage of the Kingdom being set aside from development in a short period of time (Brockelman 1989), as compared with countries which must purchase private lands.

3.2 State of protected areas in Thailand

Although protected areas in Thailand represent over 13% of the total land area of the country, and exceeds the target established by the World Conservation Strategy (Brundtland 1987), these lands may not necessarily guarantee a strong conservation mandate. Many other developing countries, like Thailand, also have a high percentage of their national territory protected. However, these areas are often referred to as "paper parks", because they are so short of staff and expertise that they are unable to function effectively (Ham et al. 1993). In addition, protected areas can be mandated by several governmental agencies with conflicting objectives, which is the case in Thailand, as national parks are managed by the Royal Forest Department (RFD). These situations may compromise the effectiveness of the conservation, education, and tourism objectives, in spite of a country's achievements in establishing a large protected land base. Encroachment by villages, poaching of wildlife and plants, fire-starting, garbage, tourism expansion,

illegal logging, governmental corruption and collusion, and developments within protected areas have been identified as major problems within Thailand's protected areas (Gray et al. 1994).

In light of these problems, the establishment of these protected areas has come at an opportune time. Currently between 21%-39% of the study area, located within the Indochinese biogeographical region of Thailand, remains in a natural state (MacKinnon and MacKinnon 1986). Lowlands in this region of Thailand were once dominated by teak (*Tectona grandis*) forests, however these forests have all but disappeared (Tungittiplakorn 1998) and more native lands are continuously being lost to various forms of development. This region also features exceptional biodiversity with at least 162 mammals (Lekagul and McNeely 1988) and higher bird concentrations in certain areas, than in Thailand's most famed national park, Khao Yai (Elliott and Beaver 1991).

3.3 Nature interpretation in Thailand

> *"...know ye the grasses and the trees then know ye the different sorts of plants, know ye also the four-footed animals, small and great, the serpents, the fish which range on the water, the birds that are borne along the wings, and move through the air."*
> Lord Buddha

Olson et al. (1984) has noted that protected areas in developing countries have not applied nature interpretation to management, as much as their demonstrated successes might warrant. Interpretation is often viewed by management, as an extraneous activity, rather than part of essential park management (ibid.). This has been a dilemma facing protected area in developed countries and it appears that this problem has also been imported to Thailand. Studies previously conducted in parks in Thailand have shown that visitor demand for wildlife viewing and other nature-based tourism activities is high, while satisfaction with the facilities offered remains low (Elliott and Beaver, 1991; NREP and HIID, 1995). Elliott (1993) suggests that visitors to parks in northern Thailand are not

satisfied with the current state of information and park communication, and suggests that various other media be produced to meet visitor demands.

> *"The provision of high quality information is clearly necessary. Visitor's centers have been constructed ... but they contain very little information. The provision of maps, guidebooks, audio-visual presentations, exhibitions and competent information officers would go a long way towards satisfying the demand for better information. The sale of such information could also generate revenue for conservation activities in the parks."* (Elliott 1993:4-5)

By 1987 visitor centers were established in 20 of the country's 56 parks (Faculty of Forestry KU and RFD 1987). In addition, this inventory determined that of the 56 national parks in operation as of 1987, 38 had nature trails, 45 information signs, 7 slide programs, and 10 outdoor presentation platforms (Faculty of Forestry KU and RFD 1987). This study, however, does not indicate the level of personal services available in Thailand parks.

Griffin (1994) has suggested that interpretation as a management tool in Thailand is largely not recognized by park officials, and also states that "Most visitors indicate that they do not know anything more about (parks) after their visit than before" (ibid: 20). He recommends that Khao Yai national park expand and develop interpretation programs including, but not limited to, interpretive signs and guided walks (Griffin 1994). As Khao Yai is Thailand's first, largest, and most famous park, the principles adopted there are frequently transferred to smaller parks where managers are quick to integrate them into their management objectives. Recommendations to parks for the expansion of ecotourism, environmental education, interpretation, and local involvement have been made (Brockelman and Dearden, 1990; Griffin, 1994; Trisurat, 1989). Ecotourism coupled with effective communication programs have been shown to enhance favourable visitor attitudes and public support, and to contribute to the management goals of protected areas in developing countries (Dame, 1985; Olson et al. 1984).

The Office of Environmental Policy and Planning (OEPP 1996), which strives to provide the general public of Thailand with an understanding of the conservation of Thailand's Biodiversity, has recognized the importance of interpretation and communication programs the general public. The OEPP (1996:37) report concludes:

> *"The continuous loss of biodiversity in Thailand at such an alarming rate is mainly caused by the lack of social awareness and consciousness in preserving natural resources for the coming generations. The lack of awareness may largely due to the fact that Thai society does not have enough information on the loss of biodiversity and, hence, is unaware of the problem or does not fully provide obvious signs of the problem to the youth."*

Elliott (1993) concluded that Thai and other visitors to protected areas did not want a strictly educational experience. Thoughtful interpretation can complement recreational opportunities, as well as foster the meditative and spiritual opportunities which were recognized initially by Dr. Lekagul (1962:132).

> *"National parks can teach people to look at nature as something sacred. By teaching people to appreciate the beauty of nature, national parks can be considered shrines where people can worship nature, meditate, find peace of mind, and draw inspiration."*

3.4 Elements of Environmentalism in Thailand

Environmental traditions and the persons which have contributed to its development in Thailand, may play an expanded role in the communication of conservation values and ideals in Thailand. Thai people are aware of these features, but may not connect their significance with current environmental issues and perceptions. Foreign visitors are also not aware of these rich traditions, as they are infrequently featured

3.4.1 Buddhism

> *"The forest...a peculiar organism of unlimited kindness and benevolence that makes no demands for its sustenance and extends generously the products of its life activity; it affords protection to all beings, offering shade even to the axeman who destroys it."*
> Lord Buddha

This rapid establishment of protected areas may have been facilitated by the overwhelming Buddhist spirituality in Thailand (Brockelman 1989), which inherently embraces nature as an element connected to the human spirit (Plate 6-c). Buddhists precepts forbid taking life of any form, revere nature as something sacred and emphasize compassion toward all living things (Buri 1989). Significantly, one who abides by these precepts is considered to have lived a successful existence.

> *"Among the Thai, who view animals and plants as part of their lives, a successful person is one who is able to live in harmony with nature."*
> (Kriengkraipetch 1989:196)

Before national parks were created in 1961, small areas around Buddhist temples were often the only sanctuaries for wildlife in populated regions (Gray et al. 1994). Even today the protection granted by Buddhist law towards temples, have influenced some to consider them as botanical gardens and wildlife sanctuaries (Buri 1989). Unfortunately, many of the temples do not cover extensive areas of land and have limited effectiveness in conserving species at the population level. Temples, although small, are perhaps the most effective protection that could be granted to wildlife and wildlands in Thailand. This degree of protection has influenced speculation on the expansion of temple sanctuaries which would cover large enough areas to conserve biological communities (Brockelman 1989).

In spite of the high degree of Buddhism, the environmental degradation which has occurred in Thailand over the recent decades has been extreme. Brockelman (1989) suggests that Buddhist precepts are for the most part are being followed selectively, and that managers of wild areas are not working with Buddhism, which remains a powerful and meaningful element in the lives of Thai citizens.

> *"With respect to our sadly neglected environment, modern Buddhism appears to be a giant opportunity that is fast asleep. The truly relevant teachings are not applied in meaningful ways to our environmental problems, and Lord Buddha's teachings are only heeded in the performance of fairly trivial, largely symbolic acts. To awaken the*

giant, opportunity may require careful plotting and imaginatable collaboration between Buddhist scholars and leaders, conservationists and biologists." (Brockelman 1989:491)

The lack of cooperatively blending Buddhist teaching with protected areas strategies may have been to the detriment of both institutions. Interpretive programs provide opportunities to link these through similar themes and lessons. Dr. Lekagul foresaw these possibilities, but his vision has not yet been realized.

"In Thailand particularly, where the people believe in Buddhism, national parks promote the teaching of religion....This atmosphere expounds one of the most important precepts of Buddhism: not to take life. This may become an example to non-Buddhist countries too."
Lekagul (1962:131-132)

3.4.2 Thai folk beliefs toward nature

Thai culture is rich in oral traditions, much of which is based on stories involving animals and plants (Kriengkraipetch 1989). Folk beliefs about nature are commonly shared among Thai people, particularly among children, through stories, riddles, folk songs, nursery rhymes and stories. Much of the attitude reflected in Thai society towards nature can be traced back to commonly held beliefs based on folklore. Wild animals are some of the most common characters in Thai legends and folklore (Graham 1954, Johnson 1985). Folk tales often depict human-animal transformations, particularly when a person dies (Johnson 1985). In these cases, it is commonly believed that the deceased person's spirit vacates the person's body, and resides among animals, especially among birds and tigers (Bernatzik 1947, Lewis 1970).

In other tales, animals characters elicit sympathetic emotions from the audience, or even relate ecologically significant concepts, in a simple and effective manner. The following are selected examples.

" A dead hornbill makes seven fig trees lonely, a dead gibbon makes seven forests dreary."
Karen Saying

A hunter
Came and saw them
Raising his gun at the mother crow
He speculated:
"Will she taste good boiled,
Or will she taste better with vegetables?"
Poor mother crow, oh, poor mother crow.
(in Kriengkraipetch 1989:198-199)

"One gibbon dies, seven forests cry in grief, one bird is lost, seven Bangan trees are in solitude."
Karen Saying

These folktales and sayings contribute to the respect that is enjoyed by certain species of animals. Hornbills and gibbons are believed by many to possess "souls", while the killing of some species (elephants, rhinos, snakes, and tigers) was at least historically considered taboo, as they were either highly regarded (Plate 6-a) or their deaths considered a bad omen (Tungittiplakorn 1998). Certain species, however, do not share the same admiration in Thai society. Kriengkraipetch (1989) suggests that certain animals are considered strange, or even malicious as a result of certain nursery rhymes. In these lullabies, some animals are portrayed as being fierce, to encourage the child to sleep in order to avoid any harm. "The gecko" (or tukkae) is a prime example of this type of lullaby.

Tukkae, its skin so spotted
The little green snake
Hangs his head down
Whoever cannot go to sleep,
Let the snake eat his liver
(in Kriengkraipetch 1989:202)

Folklore is an important foundation in understanding the perceptions of Thai people to the natural world. The preconceived beliefs are widespread, and may play a role in the process of environmental education through interpretive communication strategies in

protected areas. Folk tales are often the basal units which forge the attitudes of people to the natural world, and as such should be realized and utilized in environmental interpretation. Kriengkraipetch (1989:209) effectively summarizes the role of folk beliefs in Thai culture.

> *"From the folk beliefs...we see that Thai people... establish relationships, communicate, and negotiate with animals and plants almost as friends, and even make requests for help as they do with their fellow men. Nursery rhymes implant folk beliefs about animals and plants in the child's mind and thus form the child's attitude toward nature. The adult develops these beliefs into more complicated forms that reflect his attitude that man is a part of nature and that nature is a part of man's life."*

3.5 Influential Conservation Figures

3.5.1 Dr. Boonsong Lekagul

The rise of the environmental movement in Thailand has largely been influenced by a few high profile individuals who began to work on conservation issues in the 1950's. Dr. Boonsong Lekagul, a medical doctor from Bangkok, was once one of the Kingdom's foremost game hunters, who turned into the Kingdom's most respected conservationist by "falling in love with animals through the sights of his gun" (Gray 1978, Gray et al. 1994:5). A single event, changed his vision from hunting, to fighting to preserve the last of wild Thailand. The timing of his activities was crucial, as from the 1940s to the 1970s, Thailand experienced a phase of rapid economic growth, resulting largely from the country opening itself to international economic opportunities (Gray et al. 1994). Dr. Lekagul was one of the main forces behind the establishment of Khao Yai (Gray 1978), and many other protected areas at a time when the country's natural resources were being exploited. He founded Thailand's Association for Conservation of Nature: the first environmental group is Thailand, in 1951 (Tungittiplakorn 1998). This organization eventually evolved into what is currently known as the Bangkok Bird Club and the Wildlife Fund Thailand (Tungittiplakorn 1998). Dr. Lekagul wrote numerous magazines articles, and books on

mammals, butterflies, and birds (Lekagul 1977, Lekagul and McNeely 1977, and Lekagul et. al 1977). He understood and shared the importance of natural areas in Thailand and its people.

> *"Unspoiled nature is able to draw out the inherent beauty in man and make him a better individual. The urge for destruction can be overcome, and the base element of the human character are discarded like the old skin of a snake."*
> Lekagul (1962: 130)

Dr. Lekagul also introduced the importance of nature as a learning place to Thai people. He was one of the first people in Thailand to suggest that protected areas be used for education and inspirational purposes (Lekagul 1962). His books and field guides allowed many people to go into natural landscapes and become familiar with animals in intrinsic non-extractive recreation activities. Dr. Lekagul initiated a belief in Thailand's protected areas that fostered an understanding and appreciation to Thai and foreigners alike.

> *"National parks can teach people their responsibility for not taking advantage of society. Lessons in discipline, tidiness, adherence to rules, and consideration for the feelings of others can be taught in national parks. ... These are important practical exercises in social responsibility that may be carried over and expanded in other fields of everyday life to the overall improvement of the individual, the community, and the people."*
> Lekagul (1962:131)

In Dr. Lekagul, Thailand had the prophet, through media, and through his books. His words inspired a modern philosophical environmental consciousness in Thai culture. Dr. Boonsong Lekagul died in 1993, and has since that date, continued to be loved and revered by Thai people. He is well known as the father of wildlife protection in Thailand and his words are greatly respected and appreciated by all his countrymen.

> *"The material available for study can never be replaced once it is extinct. Thus we have to preserve it carefully and pass it on to future generations, so that they also may benefit and gain cultural value from the national parks."*
> Lekagul (1962:132)

3.5.2 Seub Nakasatien

As a national park ranger, Seub Nakasatien was committed to preserving the kingdom's immense biodiversity. His devotion to this end came into prominence when he was chosen to lead a rescue mission to save wild animals from rising flood waters. Nam Choam, one of Thailand's most biologically diverse valley was being flooded for a hydroelectric project, and many of the wild animals were drowning in the rising waters (Gray et al. 1994). The rescue effort led by Seub received tremendous media attention, and reached its climax in a sequence that saw Seub vainly trying to resuscitate a drowning sambar deer. Captured by television crews, the image of a man in tears working to revive an exhausted deer, has become for Thai people, a lasting symbol of the impact of human development on wildlife (Hanpachern, pers. comm.).

For the next several years Seub Nakasatien became increasingly militant, by condemning governmental officials, opposing hydrological projects, and taking a hard-line on poachers in protected areas. As the chief of Huai Kha Khaeng Wildlife Sanctuary, he was a passionate champion of wildlife protection, who considered himself as a "representative of the animals" (Gray et al. 1994:10). Seub continued to act out against such developments leading anti-dam campaigns and lost four of his junior enforcement rangers in a gun fight with poachers (Gray et al. 1994). Under great pressure from powerful figures and numerous death threats (many of them thought to have been influenced by various levels of government), Seub took his own life in 1990 (Gray et al. 1994). Seub has since become a martyr in Thai society, which respects him for uncompromising convictions. His memory is celebrated in folk songs, honored through day-long celebrations on campuses throughout Thailand (Plate 6-b), and perpetuated through the Seub Nakasatien Foundation, Thailand's largest environmental NGO.

3.6 Summary

Several unique characteristics of Thai culture influence the evolution of the kingdom's conservation ethic. The development of protected areas management and conservation follows the lead of developed countries, but also benefited from cultural traits. The widespread belief in Buddhism and the reverence for the monarchy enabled the country to set aside vast quantities of protected lands. The percentage of lands set aside in national parks, wildlife sanctuaries remains as an example of excellence throughout the world. As the state of conservation expanded throughout the country several prominent environmental figure arose, and became highly recognized and respected figures in the country. Dr. Boonsong Lekagul and Seub Nakasathien are widely known throughout the country for their uncompromising and noble efforts in defending natural areas of Thailand. These as well as other figures in Thai culture, make excellent candidates to further the environmental ethic in Thailand, through the use of communication and interpretive services.

Chapter 4

Inventory of northern Thailand's interpretive facilities and services

This chapter provides a comprehensive inventory of facilities and services available in the protected areas in the study. Personal and non-personal services are featured for each protected area, and services which are not offered, are also discussed.

4.1 Study area and methodology

This study is based in northwest Thailand, around the City of Chiang Mai which is located proximate to over 14 protected areas. Areas investigated in northern Thailand, were in the provinces of Chiang Mai, Lampaang, Mae Hong Song, Chiang Rai, and Lampoon (Figure 4.1). Many of the parks in this area are in second growth, or mature forested mountainous environments, in the Indo-Chinese region of Thailand. Over 1700 species of vascular plants have been found in Doi Suthep-Pui National Park (Maxwell 1988) and over 400 species of birds in Doi Inthanon National Park (Taylor 1993). These protected areas feature exceptional biodiversities, although several of the most charismatic species such as elephants, hornbills, tigers, primates, and certain ungulates have largely been extirpated from these regions (Tungittiplakorn 1998). This northern highland area is characterized by mountain ridges and wide valleys extending between Myanmar (Burma) and Laos. Evergreen montane forests occur above 1000 meters, while mixed deciduous and dry dipterocarp forests occur on the lower slopes. The valleys and upland areas have been extensively cultivated outside of protected areas, and prior to national park designation, resulting in widespread deforestation (OEPP 1996).

Figure 4.1: Map of Thailand.

Please Note: Burma is now known as MYANMAR.

National parks in the north such as Doi Inthanon, and Doi Suthep-Pui receive high tourist visitation from both Thai and foreign travelers, while others such as Mae Surin and Doi Khuntan receive far fewer tourists (Kasetsart University Faculty of Forestry 1987). Much of the region's tourism activity is concentrated during the dry season which coincides with the region's winter (Hvenegaard 1998). At this time of year the cooler climate and the lack of rain makes travel more attractive for visitors to these protected areas. Ian Sheldon and I, attempted to cover a representational time frame coinciding with the peak visitation, from September 1996 to January 1997. This study focused primarily on interpretive services in protected areas.

Table 4.1 Study Sites.

Protected Areas in Northern Thailand
• Doi Inthanon National Park
• Doi Suthep-Pui National Park
• Ob Luang National Park
• Sri-Lanna National Park
• Mae Suring National Park
• Tham Lod Wildlife, Conservation, Development and Extension Center
• Tham Pla Protected Area
• Doi Chiang Dao Wildlife Sanctuary*
• Jae Sorn National Park
• Doi Khuntang National Park
Protected Areas in Southern Thailand
•
• Krabi National Park‡
• Phi Phi National Park‡
• Khao Lanta National Park‡
• Khao Sok National Park‡

* Wildlife Sanctuaries typically do not have any tourist-based infrastructure and therefore will not be included in this analysis.
‡ sites which were outside of the study area but were visited, to be dealt with elsewhere.

Protected areas which were chosen to be visited were selected due to their visitation patterns, and also in recognition of a proposed integrated ecotourism management strategy for northern Thailand (Hanpachern pers. comm.). All the protected areas visited were inventoried for their existing interpretive services. A checklist (Appendix A) was

developed to inventory the protected area's non-personal and personal interpretive services and facilities. This inventory noted the presence of interpretive infrastructure, media, programming, exhibits, trails etc. which are currently in operation in the protected areas. The data was acquired from direct observation or through discussions with park personnel.

Where present, visitor centers were thoroughly inventoried, as these are considered to be one of the primary facilities for effective interpretation. At visitor centers both non-personal and personal services were inventoried against a pre-established checklists (Appendix B), which listed features of excellence in visitor centers (Butler 1983). The response of interpretive and information staff to park users, professionalism, conduct and appearance were evaluated, to assess the quality of personal services offered in the study sites. The history and the background of the interpretive services and planning, were sought out through interviews with park personnel.

4.2 Results

4.2.1 History of Interpretive facilities in northern Thailand

Many of the interpretive facilities and services in protected areas in northern Thailand were developed recently. The oldest visitor center investigated was the summit visitor center in DINP, completed in 1992, by a Canadian volunteer Mike Walsh. Mr. Walsh was a CUSO volunteer and he designed and built most of the exhibits in the summit visitor center. As DINP is the largest and most heavily visited park in northern Thailand, this first visitor center served as a model for other protected areas throughout the study area. The design and style of many of the exhibits at the summit visitor center have been reproduced in several of the visitor centers throughout Thailand. The finest example of this lies with the 'Questions' exhibit. This interactive panel features questions written on small doors. Visitors are encouraged to first read the question and then to open the door to find out the correct answer (Plate 3-b). This style of exhibit inspired the designers of exhibits

in the DKNP, JSNP, visitor center, and also outside of the study area in Khao Sok National Park in southern Thailand.

Michael Walsh also designed the Angka Bog interpretive trail. Following his untimely death in 1993, DINP completed both the trail and the visitor center, honouring the foreign volunteer with a biographical exhibit in the summit visitor center, and with an illustration of him on the interpretive trail pamphlet. His tragic story is well known by staff throughout protected areas in all of Thailand, and he is widely considered to be the person who instigated the current level of interpretive activities in protected areas in northern Thailand.

Most of the visitor centers in the study area were designed between 1993 and 1997, by foreign volunteers (Table 4.2). Foreign volunteers used many of the similar exhibit styles in their visitor centers, as those developed by Michael Walsh. Doi Chiang Doi wildlife sanctuary was also visited, however no inventory was conducted as facilities are not constructed in this type of protected area.

Table 4.2: History of the visitor centers in various protected areas in northern Thailand.

	DINP (main)	DINP (summit)	DSNP	OLNP	DKNP	JSNP	TL ERDC	Tham Pla
Designed by	USPC	CUSO	Thai	Thai	USPC	USPC	Thai	Thai
Completed	1995	1992	N/A	1996	1996	1997	1997	N/A

National parks are not the only protected areas with visitor centers and interpretive programs. Since 1992, there have been 16 Environmental Education, Recreation and Development Extension Centers (ERDCs) opened in protected areas throughout Thailand (Chaturasuksakul pers. comm.). These ERDC's are situated in natural settings, and provide environmental education extension programs for tourists, school children and staff of other protected areas (section 10.4.1).

Various birdwatching clubs are now visiting many of the study sites, and Dr. Narit Sitasuwan of Chiang Mai University has initiated a program which allows blind and deaf children to experience nature first-hand in DSNP. Many private tour operators raft or trek through some protected areas during their tours, offering their own form of nature interpretation.

4.3: Inventory of non-personal services

The interpretive resources of nine protected areas in northern Thailand were inventoried. Seven of the nine protected areas had a visitor center or a main exhibit area, and eight of the nine protected areas had staff which provided information to visitors (Table 4.3) (Plate 3-c). In four of the nine parks, staff was employed in what could be classified as interpretation duties, providing more than simply directional or organizational information, while DINP was the only protected area to feature satellite exhibits (Table 4.3).

Table 4.3: Interpretive services available in various protected areas in northern Thailand.

	DI NP	DSNP	DKNP	OLNP	JSNP	SLNP	MSNP	TL ERDC	SLNP	TP ERDC	Total
Visitor center	√	√	√	√	√			√		√	7
Information officer	√	√	√	√	√		√	√		√	8
Interpretive staff		√		√	√			√			4
Satellites exhibits	√										1

4.3.1 Visitor Centers

"Every national park In Thailand is Based on Yellowstone in the United States. Yellowstone has a visitor center therefore so do the parks in Thailand."

Steve Paglia JSNP

"The most important sign in the park should be the one directing tourists to the visitor center."

Mr. Rungruen OLNP

All the visitor centers that were investigated in northern Thailand, had exhibits which informed the visiting public about features of the protected area (Table 4.4). Four of the 7 visitor centers had a variety of exhibit styles, and featured obvious themes such as conservation, cultural heritage, and life zones. Three visitor centers exhibits had some form of corporate advertisements, while all visitor centers examined had some form of grammatical or spelling mistakes in the English text. In two of the 7 visitor center researchers could not find any factual errors in the text, figures, and illustrations. All visitor center exhibits were in both Thai and English. Three centers had slide tape shows. However, it was obvious to researchers that these were infrequently used by the staff. The

Table 4.4: Non-personal services at visitor centers in protected areas of northern Thailand.

	DINP (main)	DINP (summit)	DS NP	OL NP	DK NP	SL NP	MS NP	TL	TP	Total
• Exhibits	√	√	√	√	√			√	√	7
• Hand's On	√				√					2
• Interactive	√				√					2
• Variety in Styles	√	√		√	√					4
• Obvious themes	√	√		√	√					4
• No advertising	√	√		√	√					4
• Appropriate Objects	√	√		√	√				√	5
• No vandalism or excessive wear				√						1
• Correct Information	√	√		√	√					4
• No spelling or Grammar mistakes		√		√						2
• Real objects		√		√	√					3
• Updates				√						1
• Options in Park	√	√		√	√				√	5
• Interp. Programs										0
• Preservation	√	√		√	√					4
• Safety and Rules		√		√	√		√		√	5
• A/V presentations	√			√	√					3
• History and Facts		√		√	√					3
• Orientation	√	√		√					√	4
• Surrounding Opportunities				√						1

audio visual show in DINP was the only one which was determined to be shown with any frequency to the general public. The other two slide programs were generally restricted in use to environmental education groups and school children. In one case, personnel were unable to operate the audio-visual equipment for the presentation to the research team. The slide shows that were seen provided much of the basic information on the park. However they were not inspirational in nature.

4.3.2 Signage inventory

Signs were common throughout many protected areas in northern Thailand (Table 4.5), particularly around areas that experience heavy visitor use. Many of the signs were hand-made while a minority were professionally made on high quality media. The thematic integrity and style similarity among the signs within a particular park was quite variable, while very little similarity of style existed among similar signs between protected areas. National parks in particular did not have an easily recognizable style, which could serve as a source of familiarity to visitors. Most of the signs in the parks were directional in nature (Plate 1-c) and therefore contributed little to the interpretive component of parks.

The Tourist Authority of Thailand (TAT) had placed their signs at 5 out of the 8 protected areas that were investigated. These signs had the highest thematic integrity of all signs that were seen between parks. These signs were professionally made and generally were placed near the entrance of the park in an obvious place which would be seen (Plate 1-a). One TAT sign served as a warning to park users, about slippery rocks. All TAT signs did little to provoke insight or revelation, and as a result their interpretive value was quite low (section 7.2.2). According to Mr. Krit Manager of Tham Lod ERDC, the TAT sign at his protected area was designed and erected without his consultation.

Most protected areas in northern Thailand (had in prominent areas), a large map of the park, and the rules of conduct displayed in protected areas (Table 4.5). Six of the protected areas had trees labeled around the visitor centers or headquarters with their names

in Thai, English, and Latin. Only one trail head (Gu Mai Pan DINP), had a sign which indicated the features of the trails such as length, difficulty and what to expect during the walk. All other trails in protected areas had a non-interpretive, directional sign which indicated the location of the trail head.

Four out of the 8 protected areas in our study area had effective interpretive signs, outside of their visitor centers (Plate 1-d, 2-b). With the exception of the signs at Ob Luang NP, all other interpretive signage was handpainted on wood, and with few exceptions featured both Thai and English text (section 7.2.2).

'Wise signs' (Plate 2-a) are typically a simple phrase or proverb which is intended to cause visitors to reflect (i.e.: "Beautiful forests, clear waters, arise from caring minds"- DSNP). These hand-painted signs were typically only written in Thai, and were featured in 4 of the protected areas inventoried. 'Wise signs' were often placed away from the headquarters or other developed areas. They were generally placed along trails or near waterfalls and were intended to be inspirational in nature.

Table 4.5: Signage in protected areas in northern Thailand.

	DINP	DSNP	DKNP	OL NP	JSNP	SLNP	MS NP	TL ERDC	Tham Pla	Total
Interpretive Signs	√			√	√			√		4
Directional signs	√	√	√	√	√	√	√	√	√	9
TAT sign	√	√		√				√	√	5
Trail Head signs	√									1
Rules of conduct	√	√	√	√	√		√			6
Tree labels	√	√	√	√	√			√		6
Wise Signs		√	√		√			√		4
Park Map	√	√	√	√	√			√	√	7

4.3.3 Published media

Little published media was available to protected area users in northern Thailand (Table 4.6). Five out of the 8 protected area that were surveyed provided a park brochure (Plate 3-a). In only two of the protected areas were the brochures given to researchers immediately upon entry, or placed atop a counter top or rack easily accessible to the general

public. In the other three instances we had to request them, and in one situation it appeared as though we received the last of their supply. Every brochure contained a map of the park, and three protected areas that were investigated had additional maps printed on standard A4-sized sheets, available for free to their visitors. DINP used a private sponsor to cover the cost of production, as a small 'Pepsi' logo appeared in the top corner.

DINP was the only protected area in northern Thailand which had a bird checklist for the park (Table 4.6). No other types of checklists or published media were available directly concerning the various protected areas. In DINP several other pamphlets were also available at the headquarters. These included conservation organizations, photo clubs, as well as private trekking companies.

Table 4.6: Published media in protected areas in northern Thailand.

	DINP	DS NP	DK NP	OL NP	JS NP	SLNP	MS NP	TL ERDC	Tham Pla	Total
Park Brochure	√	√	√	√					√	5
Bird Checklist	√									1
Other checklists										0
Other printed (maps, etc.)	√	√	√							3

4.3.4 Infrastructure

There was very little interpretive infrastructure available to visitors in protected areas in northern Thailand outside the visitor centers (Table 4.7). Three areas had interpretive or nature trails, with several signs located trailside, interpreting and informing the users of the significant features in the landscape. The Angka Bog interpretive trail in DINP is the best example of this in northern Thailand. Aside from the interpretive signage, this lasso trail features, for part of its course, an elevated boardwalk which crosses a wet bog. The only other protected area which had a boardwalk was Tham Pla, which had no trailside signage.

The Angka Bog interpretive trail has a pamphlet which complemented the numbered posts along the trail. Laminated pamphlets were prepared by park managers. However,

they were made available for public use only on one day during our study period. One of these laminated pamphlets however was cut up, and the appropriate sections were tacked onto the railings beside the coinciding sign (section 8.2.1). Pamphlets which were not laminated were of short supply, and due to the costs of printing were not being made available to the general public. Of the 11 stations along the trail, 3 of the laminated brochures could be read clearly. The remaining 8 were either absent, or severely weather damaged.

Three other protected areas had trails which had some interpretive signage (Table 4.7). These trails did not follow the numbered post design, rather signs were arranged in a sequential way along the interpretive trail. The interpretive trail at Ob Luang National Park features four nicely designed interpretive signs (Plate 2b, 2c). Signs of the same quality were not yet erected along the remaining 7 stops along the trail. These signs features simple phrases such as "Granite Rocks", without any elaborate text (Plate 2-d).

The signs along the interpretive trail at JSNP, were rustic, but effectively designed and written (section 8.2.1). These hand painted signs were positioned low to the ground and vines and other vegetation had grown to conceal some of the text. The interpretive signs at Tham Lod ERDC demonstrated what managers could do in spite of the limitation of a small budget. Creative, colourful signage was constructed and placed at well spaced intervals along the trail, including in the cave. The signs were simple and discreet, and complemented the natural features. Most of the interpretive signs at Tham Lod were in both English and Thai, however some were written only in Thai. Errors in the English text were requested to be pointed out by the management the ERDC. Grammatical errors on the signs were corrected within 12 hours of their detection. The English interpretive signs which were suggested as being ineffective by the research team, were re-written in a more effective manner and erected during the period of the study (Plate 1-d).

Two of the 8 protected areas inventoried had amphitheaters or outdoor stages (Plate 3-d), but these were in obvious disrepair and when asked, the managers of the respective

parks indicated that they were rarely used. The only use that was evident to the researchers was when a camper chose to pitch his tent between the stage and the seats of the Doi Khuntan amphitheater. No viewing platforms, blinds (hides), or other interpretive infrastructure were present in any of the sites that were investigated.

Table 4.7: Interpretive infrastructure in various protected area of northern Thailand.

	DINP	DS NP	DK NP	OL NP	JS NP	SL NP	MS NP	TL ERDC	Tham Pla	Total
• Amphitheater / Stage			√		√					2
• Interpretive Trail	√			√	√					3
• Viewing platforms /hides										0

4.4 Inventory of personal services in northern Thailand

Very little personal interpretive service was offered to visitors to protected areas in northern Thailand (Table 4.8). At two of eight visitor centers that were there investigated, staff were present and appeared uniformed and professional. Six of the eight visitor centers were not staffed with any park personnel during the times in which the researchers were present.

The staff that were present provided tourists with little appropriate service. Only one staff member offered a friendly greeting, paid attention to the visitor, and pointed out features that should not be missed during their visit. Table 4.8 provides further details on the personal services and the frequency in which they were offered to the investigators. One of the visitor centers in northern Thailand had a gift shop. The gift shop at the summit visitor center in DINP provided opportunities for visitors to buy local crafts, postcards, clothing, and natural history related books and checklists. During days which experienced heavy visitation, a refreshment stand was also operated at this location. These shops are operated independently from the national park management. However the

operator of the gift shop was frequently approached with questions, as DINP personnel did not regularly frequent the area of the visitor center.

Visitors to national parks in northern Thailand are generally met by park staff when they enter the park to pay their entrance fee at the checkpoint. Little information about the park is shared at that time with the visitor. In DINP visitors are also met at a second checkpoint. All vehicles are stopped and a national park ranger ensures that the occupants have paid their entrance fee, and were not in violation of park regulations. This second checkpoint is typically staffed by three or four individuals, however they do not extend to visitors much information apart from directions. This checkpoint is one of the best birdwatching and insect watching sites in northern Thailand. Located in the middle of a mature dipterocarp forest, the mercury vapour lights of the checkpoint attract, at certain times of the year, moths and other night-flying insects. This abundance of insects in turn attracts a high concentration of insect eating birds which are easily viewed from the roadside. This phenomenon is not shared or advertised to general tourists, although birdwatchers often congregate around this checkpoint, they know about the site from bird-finding guides, and other birders.

According to park management, the main visitor center in DINP typically receives very little visitation from tourists, because visitors to the park are eager to get to the summit or the stupahs and do not wish to waste time. Many Thai nationals aspire to stand atop Doi Inthanon much like the Japanese hope to ascend Mount Fuji (Gray et al. 1994). One day was spent outside the main visitor center in DINP, which is located within 2 kms. from the park's main gate. From 09:30 to 16:00 only two travelers used the visitor center. Both were there only momentarily. One picked up a map (they didn't even shut off their vehicle), the other picked up a map and used the washroom. Most of the morning one of the information officer at the visitor center spent washing their car. The remainder of the day the staff at the visitor center was not observed conducting visitor center or interpretive related activities.

Few protected areas had any interpretive programs. Three national parks conducted on-site Environmental Education (EE) programs and three also conducted EE extension programs in neighbouring communities (Table 4.9). These programs consisted primarily of ecological concepts but also explained to the participants the usefulness of the park and the need to protect the park's from harmful activities such as poaching and fire starting. Most of these programs were directed towards school-aged children, however it was indicated that on occasion, adults and community leaders were sought out to attend these seminars. These programs have recently been initiated with one park having completed their initial on-site EE program during the study period.

Table 4.8: Personal Services at various visitor centers in protected areas in northern Thailand.

	DINP (main)	DINP (summit)	DS NP	OL NP	DK NP	SL NP	MS NP	TL	TP	Total
•Prof./ uniformed staff	√				√					2
•Friendly greeting	√									1
•Immediate response										0
•Guest attention									√	1
•Anticipates questions										0
•Interpret rules										0
•Can't miss features	√									1
•Brochures offered	√			√					√	3
•Gift Shop		√								1
•Personal Needs	√									1

There were no evening programs offered to overnight users of the protected areas, although every protected area had camping and/or guest house accommodations and therefore at times had visitors in the park during the evening hours.

Table 4.9: Interpretive programming in protected areas in northern Thailand.

	DINP	DSNP	DKNP	OL NP	JSNP	SL NP	MSNP	TL ERDC	Tham Pla	Total
• EE extension		√	√		√					3
• On site EE programs		√		√	√					3
• Evening programs										0

No protected areas that were investigated appeared to have a comprehensive interpretive master planning document. The interpretive services that were created were done in a non systematic manner, in which the goals and objectives of the facilities were not established. There are no guidelines in place to determine the benefits and achievements of the interpretive services and facilities in northern Thailand's protected areas.

4.5 Summary

Most of the protected areas in northern Thailand have some kind of interpretive facilities. Most had visitor centers, however these were not necessarily designed for maximum efficiency. In at least two cases the visitor centers received very little use by tourists to the park. These visitor centers were located in sites which were not frequently used by users of the park, and subsequently received minimal visitation. The placement of visitor centers should coincide with high traffic areas of the park so that they may be potentially used by a high percentage of the protected areas visitors. Brochures seemed to be limited because of the cost associated with their distribution. Protected areas managers also were fearful that persons using the brochures would discard them once they were finished, and therefore would contribute to the litter problem already present in many of the protected areas (Plate 4-b).

There were a great variety of interpretive facilities available throughout the study sites. However, most of these were not encountered with great frequency. There are parks which would greatly benefit from the construction and use of some of additional facilities for the public. Viewing blinds, canopy platforms or feeding stations developed in appropriate areas would serve as a means of visitor displacement, and facilitate first-hand encounters between nature and the public.

Information officers and interpreters were generally reactive in their approach to visitors in their parks. No interpreters were seen doing roving or point duties, rather their activities were mainly concentrated in the visitor center areas. This is unfortunate because many travelers visiting northern Thailand are on very tight schedules and have little preparatory time prior to their arrivals. Those travelers who enter visitor center are also unlikely to be fully satisfied if they do not assert their demands for information. Interpretive media and programs are frequently not offered to visitors. This was clearly an inefficient use of the facilities, as their were many things that could have been done to improve the effectiveness of the visitor center, the interpretive exhibits and the personal services. In most cases interpretive staff, when present, were not in distinctive and professional-looking uniforms, seldom greeted and welcomed visitors, and offered no recommended activities.

Existing staff should be evaluated to determine the persons with personalities and interests aligned with public communication. Researchers were surprised that at least on two occasions, staff not employed as interpreters or as public relations officers, showed skills in visitor communication. These staff members were not directed into these fields by park managers, rather continued in their unskilled and unchallenging labor positions (section 10.1.2). Personnel who exhibit interest in speaking with visitors and communicating the features of the park in a simple but effective manner. Neither of these suitable candidates for interpretive positions, had a high level of academic education. However they showed demonstrated skill through life long experiences with the areas' natural features.

Lack of personal services directed towards the research team may be accounted by the shyness and lack of confidence in English by the staff. We were frequently joined by our Thai research assistants who usually were the first to pose questions to the staff. Some female staff members, especially those from rural backgrounds, were found to be uncomfortable approaching strange men, especially foreigners. This poses a serious

problem for natural areas mangers who employ these persons as their public relations representatives. Although foreign or Thai travelers may find this shyness charming, the effectiveness of their duties are compromised by this nervous behavior.

Environmental education, and scheduled programming are being underutilized in protected area in northern Thailand. Thai people are generally very sociable and skilled communicators towards their fellow countrymen and quickly became at ease with persons they encounter. At sites which have developed environmental education communication programs, the successes are clearly evident in both the responses of the participants, and through the interpretive staff. Staff at Doi Suthep-Pui National Park who were developing an ongoing environmental education and interpretive plan for the park were found to be exceptionally creative and productive in their approach. The personnel at this park demonstrated creativity in communications strategies, and should serve other protected areas in Thailand as a model of excellence. They were constrained with most of the limiting factors that challenge other protected areas, but have found ways in which to develop programs once their original objectives were realized and acted upon.

There appeared to be no interpretive master plan in place for the northern region, nor for any specific protected areas that were investigated. The interpretive planning appeared to be reactive to situations, and demonstrated no clear objectives or goals of the agencies. The establishment of feasible objectives is an effective way to develop and implement a comprehensive interpretive plan which would be multifaceted in its approach, and provide for evaluation and improvements in the future.

Chapter 5

Evaluation of Visitor's Perceptions to Protected Areas and Interpretive Services

Chapter 5 provides and discusses the results obtained by a questionnaire administered to protected area users. Various questions were posed to determine preferences towards features in parks, including interpretive services. Responses toward the usefulness of existing communication strategies, as well as recommendations from park users are valuable in determining the effectiveness of these services.

5.1 Survey instrument and methods

One questionnaire was developed and implemented to meet the requirements of my study on the communication programs in protected areas, as well as Ian Sheldon's study on the potential of ecotourism in northern Thailand. This joint questionnaire was developed in Canada and modified following a pre-test of 14 participants in Thailand. The survey instrument was approved by the University of Alberta's ethical standards committee, as well as the National Research Council in Thailand, which granted both Ian and I, permits to conduct this study in Thailand. My applied study concentrated on qualitative criteria using methods described by Patton (1987).

The emphasis on the research is qualitative because of the need for flexibility while conducting interviews and in light of the cross cultural component of this study. A standardized, open-ended survey instrument (Appendix C) was employed (Patton 1987). This permits precise questioning, while allowing for further exploration when appropriate. Use of this method following a strict schedule is preferred, as it will allow for comparative analysis of the respondent's answers, while providing in-depth information. Key words and phrases, given in response, were grouped for qualitative analysis. Data were coded

(Bogdan and Bilken 1992), which facilitates sorting of descriptive data into categories. Several other questions in the survey followed a scaled Likert-style (Medlin and Ham 1992). The interview included questions to obtain socio-demographic data. Some of this data obtained will be analyzed using quantitative methods. This combination of qualitative and quantitative approaches, allows for a better understanding of the overall inquiry. This combination approach (triangulation) benefits validity and verification and assures reliability, because qualitative research has been criticized for a general lack of vigour (Sheldon 1999).

Most surveys were conducted near high traffic centers in the protected areas, such as major attractions and visitor centers. Researchers asked persons thought to have already experienced some aspects of the protected area, to willingly participate in the survey. As such, the survey was non-random, but relevant to the goals and objectives of the research.

Most of the visitors to Thailand's protected areas cannot speak English, therefore two research assistants translated the questions and the answers (Plate 5-a). One of the two primary researchers was always in attendance during the survey sessions, writing down the responses, and directing follow-up questions which resulted from the discussions. Direct quotes were recorded when appropriate, as they encouraged the open-ended feature of this instrument.

5.2 Results

5.2.1 Socio-economic data

An open ended survey instrument, was used to survey 150 visitors, in 7 national parks and protected areas. Visitors were approached by either myself, Ian Sheldon, or our two research assistants, and asked if they were interested in participating in a survey on protected areas. Persons approached by the research team, voluntarily provided up to 60 minutes (in some cases) during the informal interview process. Those persons which

declined our request for interviews typically indicated that they could not spare the time. Most of the interviews were conducted in Doi Inthanon National Park, and Doi Suthep-Pui National Park, because of the high number of tourists, while a small number were conducted in the other protected areas. A total of 99 (66.0%) Thai people, and 51 (44.0%) foreign tourists were interviewed. Thirteen different nationalities were represented in the survey (Table 5.1).

Table 5.1 Nationality of survey participants (n=150).

Nationality	Number of Interviews	Percent of Total
Thailand	99	66.0%
United States	14	9.3%
Australia	8	5.3%
Germany	7	4.7%
Holland	6	4.0%
United Kingdom	5	3.3%
Canada	3	2.0%
Belgium	2	1.3%
Israel	2	1.3%
France	1	0.7%
Italy	1	0.7%
Malaysia	1	0.7%
Zimbabwe	1	0.7%

Most of the Thai tourists surveyed spoke through our translators while most of the foreign tourists that were surveyed spoke English. Only one interview was conducted in French. The sex ratio of those surveyed was Males 97: Females 53. Typically those interviewed were rather young, with more than 81% of our subjects were between the ages of 19 and 40 (Table 5.2). Only 1 person over the age of 60 was interviewed, while 4.0% of those surveyed were below the age of 18.

Table 5.2 Age distribution among survey participants (n=150).

Age	0-18	19-25	26-40	41-60	60+
Number	6	51	71	21	1
Percentage	4.0%	34.0%	47.3%	14.0%	0.7%

The level of education was typically very high with 86.0% of our interviewees having completed or are currently in the process of completing bachelors degree (Table 5.3). Two percent did not complete high school, 12.0% did complete high school, and 10.0% of those surveyed completed a master's degree.

Table 5.3 Highest levels of education among survey participants (n=150).

Highest Education	Grade 9	High School	In University	Bachelor's Degree	Master's Degree	Ph.D.
Number	3	18	47	66	15	1
Percent	2.0%	12.0%	31.3%	44.0%	10.0%	0.7%

The highest percentage of career types of those surveyed were professionals (44.67%) (teachers, nurses). Students also represented a large percentage of the survey population (24.67%), while the trades, business, artists, hospitality and retired individuals all represented less than 10% of those surveyed (Table 5.4).

Table 5.4: Careers of survey participants.

Career	Number	Percentage (%)
Professional	67	44.67 %
Student	37	24.67 %
Trades	12	8.00 %
Other	11	7.30 %
Artist	7	4.67 %
Business	7	4.67 %
Hospitality	5	3.33 %
Unemployed	3	2.00 %
Retired	1	0.67 %

5.3 Results: Visitor preferences in Protected Areas

5.3.1: Importance of protected area features

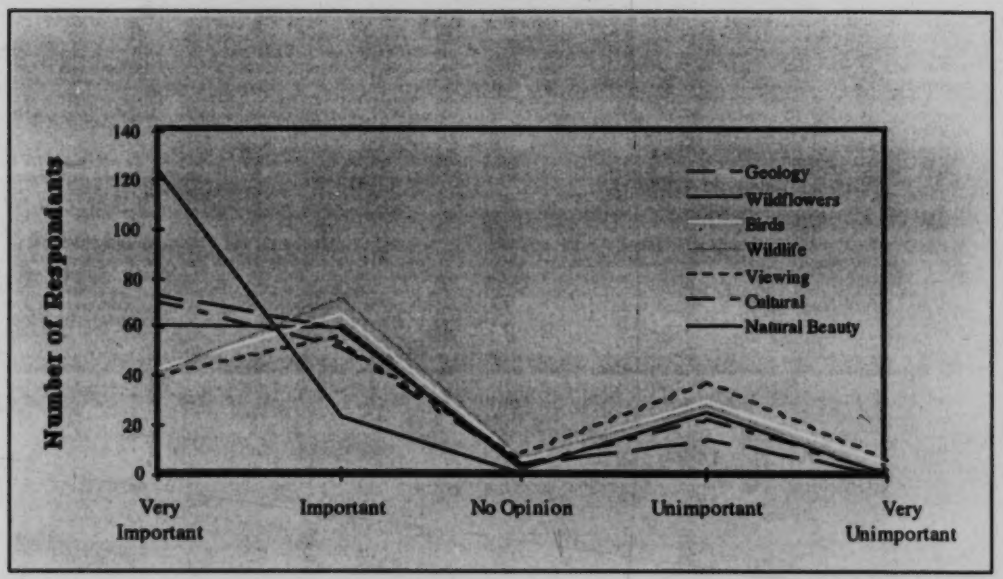
Question 11: "How important are these features to you during your visit?"

Geology, wildflowers, birds, wildlife, wildlife viewing, culture, and natural beauty were regarded as 'important' or 'very important' by the majority of persons surveyed during their visit in protected areas. Natural beauty was the 'most important' feature to tourists with 82.67% of respondents indicating that it was 'very important' to them during their visit and 16% regarding it as 'important'. Only one person surveyed considered natural beauty 'unimportant' during their visit.

Geological features were also highly regarded by visitors, as 88% of persons surveyed considered them to be 'important' or 'very important' during their visit (Figure 5.1). Cultural features and wildflowers also had more people consider them 'very important' than 'important' and under 20% of survey participants finding them 'unimportant' or 'very unimportant.'

Birds, wildlife, and wildlife viewing were considered 'important' or 'very important' to at least 65% of persons surveyed. Many visitors which considered wildlife viewing as an activity 'not important', commenting that viewing activity is not important so long as they know that wildlife still occurs within the protected area.

Figure 5.1: Visitor interest levels in parks features.



The ranking of natural features by the number of respondents which consider them important or very important is as follows (n=150): Natural Beauty 148, Geological Features 132, Local Cultures 122, Wildflowers 121, Wildlife 113, Birds 109, and Wildlife Viewing 97.

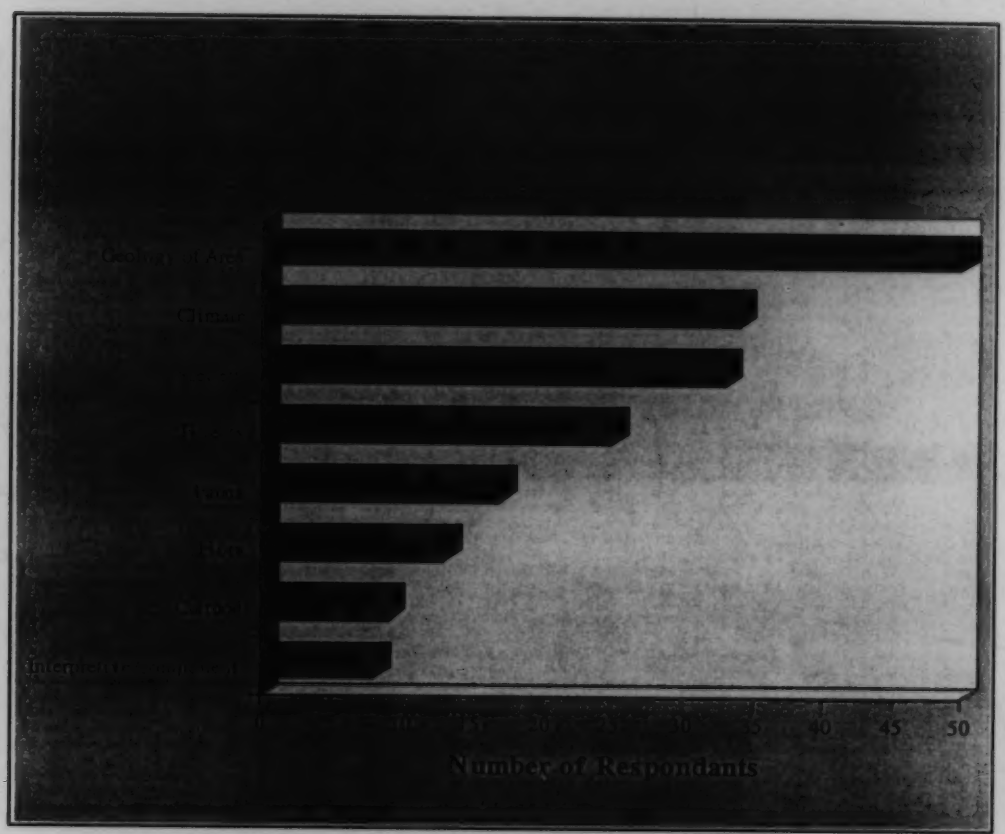
5.3.2: Visitor preferences

Question #21: "What did you like most about this attraction?"

Three survey participants indicate that they didn't like anything in particular during their visit to the protected area, while the remaining 147 respondents provided 201 responses. Multiple answers were not discouraged as respondents often could not limit their answers to one thing. All responses were categorized into 26 distinct groups based on key words or phrases, with 84.6% of the responses being grouped into the top eight headings (Table 5.4). Natural features such as geological (waterfalls, caves), climate, natural scenery, forests, fauna (birds, insects), flora (flowers, trees, ferns), and cultural components (stupahs, shrines) were among the most favoured features in the protected areas. Interpretive facilities and exhibits were most liked by 8 respondents. The remaining

18 responses were unique and not representative of numerous survey participants. Of all responses, 196/201 (97.5%) of things that people most liked in Thailand's' protected areas, were determined to potentially be complemented by improved interpretive efforts.

Figure 5.2: Features which visitors "most liked" in protected areas (n=150).



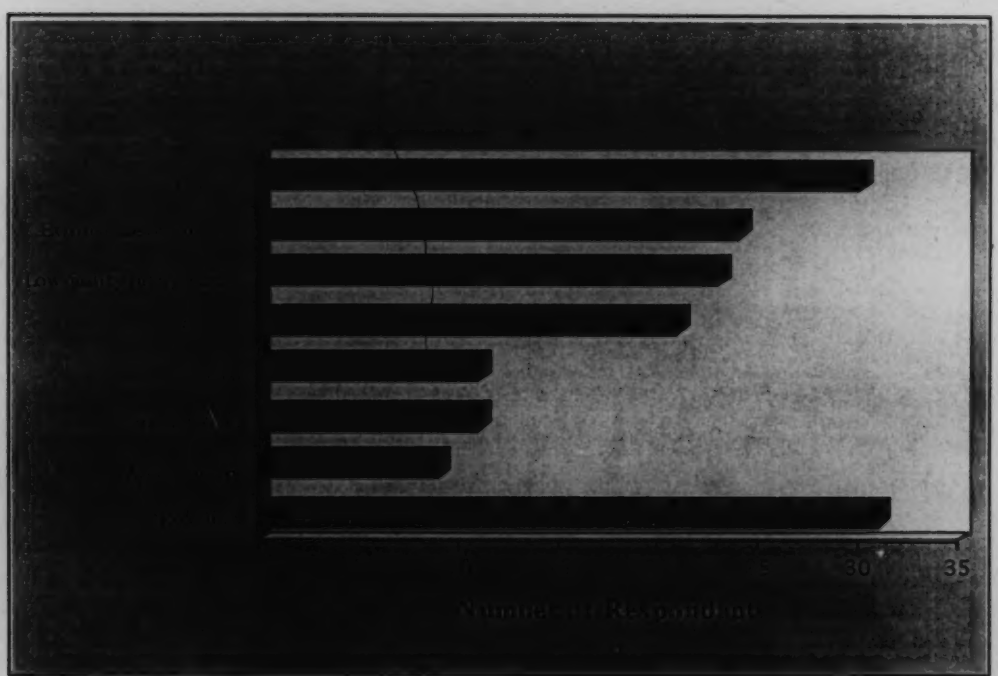
5.3.3: Visitor dislikes

Question #22 : "Do you have any criticism or dislikes about this attraction?"

Of the 183 responses that were given in response to this question, the top 8 responses are represented in Figure 5.3 and represent 74.7 % of all responses by survey participants. Garbage (20.0% of respondents), extrinsic developments such as radar stations, restaurants (16.0%), large crowds (14.0%), and poor interpretation and

information (12.66%) were the most common dislikes in protected areas. Slightly more than one fifth (20.66%) of the respondents indicated to researchers that they had no criticisms or dislikes of the protected areas they were visiting. 'Dislikes' such as litter (Plate 4-b), lack of information and crowds etc. represented 65.58% of dislikes, and are considered mitigatable through improved interpretive efforts. Extrinsic developments and other responses which represent over 30% of visitor dislikes, are contrary to inherent value of protected areas and are difficult to positively interpret to park users.

Figure 5.3: Top dislikes among survey participants in protected areas.



5.3.4: Most favoured experiences

Question #14: "What was the best natural experience that you have had in northern Thailand? Why?"

An attempt was made to limit these answers to natural experiences, however in many cases the respondents linked cultural or social themes with natural themes so that the two coexisted. Two respondents mentioned more than one incident, and therefore 152 responses were received. Four of those surveyed stated that nothing thus far experienced could be classified as a favourite moment.

Geology (waterfall, caves, and hotsprings) proved to be the most favourable experiences, followed by interactions with wildlife (birds, flowers, butterflies), the climate and fog, and outdoor activities such a trekking, biking and rafting (Table 5.5).

Table 5.5: Visitors favourite natural experience while in northern Thailand (n=152).

Favorite experience	Number
• Geology (waterfalls, hotsprings, caves..)	27
• Wildlife (birds, flowers, butterflies...)	24
• climate/ fog	22
• Activities (trekking, biking, tenting...)	22
• landscape/scenery	19
• Cultural (Royal Projects, Hill Tribes...)	17
• social	5
• peaceful/ solitude	4
• touching nature	4
• nothing	4
• Threatened systems	4

Thai and foreign visitors differed in a number of experiences which they most favoured in northern Thailand. Thai visitors considered the cool climate as their most preferred feature, followed by geology, wildlife, and activities such as treks, and rafting. Foreigners considered the landscape (forests, hills, and mountain scenery) as their most memorable and favoured experience, followed by outdoor activities, geology, and wildlife. Foreigners also ranked peace and solitude in protected areas quite highly, while Thai persons did not. The social component of being with friends and family was mentioned by 5 Thai visitors, and not by any foreign visitor to protected areas.

5.4 Results: Visitor Preferences to Interpretive Services

5.4.1: Importance given to gain knowledge

Question #27: "Is gaining knowledge to you important during your visit here? Why?"

Survey participants indicated gaining knowledge was an important aspect of their visit. Among the 150 visitors surveyed, 92.66% of respondents suggested it was *important* or *very important* to them to gain knowledge during their visit to protected areas. The largest motivation for learning more about the area is to gain a 'better understanding' of the site. 'Sharing information' with others, 'self-improvement', 'conservation', and 'relaxation' were other common reasons given for gaining knowledge (Table 5.6). There was no significant differences among the user groups (age class, nationality, gender) that were surveyed towards their desires to gain knowledge in protected areas. The 10 individuals (7.34%) which indicated that gaining knowledge was not important to them explained to researchers that they were either to old to learn, or were visiting the area simply to relax.

Table 5.6: Reasons respondents gave in explaining their desire to increase their knowledge during their visit to a protected area in northern Thailand.

Reasons	Number
• to understand the site/nature	53
• to share the information with others	25
• for personal improvement	14
• to help in conservation efforts	10

5.4.2: Use and usefulness of interpretation

Question #28: "During your visit, did you use the following? If yes, were they useful?"

5.4.2.1 Usage of interpretive facilities and services

Visitors were asked which interpretive resources they had thus far used during their visit in the protected area. These data are represented by the 'potential users', 'actual users' and the 'percent use' (Table 5.7). 'Potential users' are persons which had the opportunity to use the interpretive service. The availability of interpretive services and facilities are not equal throughout protected areas surveyed. The *percent use* is a representation of the *actual users* among the *potential users*.

Interpretive signs were the most frequently used interpretive services by visitors, with 80.65% of potential users indicating that they had used them during their visit (Table 5.7). These signs represent the standard interpretive signs, but may also include directional signage, as many visitors (especially Thai), unfamiliar with classic interpretive signage concluded that all signs were interpretive in nature.

Interpretative trails were also widely used in the various protected areas, as 64.26% of potential users indicated that they had walked the interpretive or nature trail. All protected areas that were surveyed had visitor centers and 40.00% of the visitors made use of the service prior to our interview. Brochures, checklists, and park rangers/interpreters were used by fewer than 20.00% of interviewed visitors (Table 5.7). Not one of the 76 people we interviewed in DINP had seen the slide-tape show. No other protected area in our study area offered this type of interpretive service to the general public.

5.4.2.2 Usefulness of interpretive Services

When visitors to Thailand's protected areas were asked how useful to them specific interpretive services were during their time in the park, the responses were quite variable. The interpretive signs were *useful* or *very useful* to 75.00% of those who used them (Table 5.8). Interpretive trails were *very useful* or *useful* to 93.65% of users, and all 10 persons (100%) which used the DINP bird checklists considered it *useful* or *very useful*. Visitor centers and interpreters were considered *useful* or *very useful* by 80.32% and 77.00% respectively.

5.4.2.3 Usefulness of interpretive services among user groups

Interpretive signage, the most frequently used interpretive media, varied considerably among those surveyed as to the degree of usefulness. Twenty two (22.22%) Thai visitors found the interpretive signs *very useful* in contrast to 2 (3.92%) foreigners. Seventeen (33.33%) Foreigners found interpretive signage *not useful* or *useless* in comparison to 8 (8.08%) of Thai persons (Table 5.9).

Both Foreigners and Thai persons were very satisfied with interpretive trails with 95.56% of Thai and 94.11% of foreign visitors finding them *very useful* or *useful*. Thai users of visitor centers were generally quite pleased with the facilities, with 16 (16.16%) respondents indicated that it was *very useful* in comparison to 5 (9.80%) of foreign respondents finding the visitor center *very useful*.

Brochures were not widely used by visitors to the various protected area, but Thai visitors found them more useful than Foreigners. Fourteen (14.14%) Thai visitors found the brochures useful or very useful in comparison to 3 (5.88%) foreigners. One (1.01%) Thai visitor found the brochure *not useful* or *not at all useful* in contrast to 4 (7.84%) foreign visitors.

Table 5.7: Interpretive resource use among survey participants (n=150).

Interpretive technique	Potential Users*	Actual Users	Percent Use
• Interpretive Signs	124	100	80.65%
• Interpretive Trails	98	63	64.29%
• Interpreters /Rangers	150	35	23.33%
• Visitor Center	150	60	40.00%
• Brochures	111	22	19.82%
• Checklists	76	12	15.79%
• Audio-Visual	76	0	0.00%

* Potential Users are the visitors who were surveyed in a protected area, which featured the service.

Table 5.8: Use and usefulness of various interpretive resources in protected areas in northern Thailand (n=150).

	Did not Use	Very Useful	Useful	Not Very Useful	Useless
• Brochure	128	5	12	3	2
• Interpretive Signs	50	24	49	19	6
• Private Guide	123	8	7	10	2
• Tours	148	1	1	0	0
• Visitor Center	89	21	28	12	0
• Audio-visual	150	0	0	0	0
• Checklists	138	6	4	0	0
• Interpretive trail	87	26	33	1	3
• Interpreter/ Ranger	115	13	14	2	6

Table 5.9: Usefulness of Interpretive Services to Thai and foreign tourists (n).

	Thai *Useful or Very Useful*	Foreigner *Useful or Very Useful*	Thai *Not Useful*	Foreigner *Not Useful*
• Brochure	93.33%* (14)	42.86% (3)	0.67% (1)	57.14% (4)
• Interpretive signs	86.88% (53)	54.05% (20)	13.12% (8)	45.95% (17)
• Private guide	87.5% (7)	42.10% (8)	12.5% (1)	57.90% (11)
• Visitor center	81.40% (35)	77.78% (14)	18.60% (8)	22.22% (4)
• Interpretive trail	95.56% (43)	94.11% (16)	4.44% (2)	5.89% (1)

(may not add up to 100%, as 'no opinion' are not included in this analysis)
* usefulness of these services may not be as significant, as a result of low number or actual users

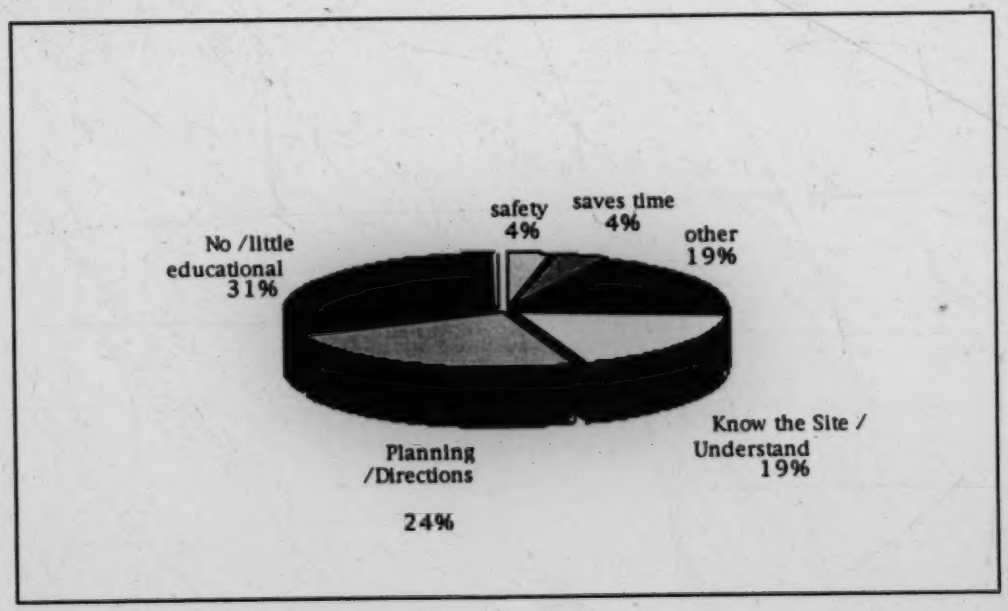
Thai persons were generally more positive in response to the interpretive resources than foreign survey participants. Of the 211 Thai comments that could be classified as positive (useful) or negative (not useful) (excluding 'no opinion'), 185 (87.68%) indicated that the interpretive services were either *very useful* or *useful*, while 26 (12.32%) indicated that they were not useful. Foreigners made 66 (62.86%) comments which indicated that the interpretive services were useful of *very useful* while 39 (37.14%) persons indicated that they were not useful (Table 5.9).

5.4.3: Contribution of interpretation

Question #29: "How do you feel that these (the services used) contributed to your visit?"

The largest segment of respondents (31%) indicated that the interpretive services provided *little educational value* in their visit to the protected area. *Planning/directions* and other itinerary-based assistance were the second largest contribution resulting from the interpretive services. Nineteen percent of the persons which were surveyed, indicated that the interpretive services allowed them to *know more about the site and to Understand Nature* (Figure 5.4).

Figure 5.4: Interpretive Contribution to visitor experiences in northern Thailand (n=190).



5.4.4: Topics learned during visit

Question #30: "What was the most significant thing you learned during your visit?"

This question was posed to determine the method in which protected area users acquired knowledge. Survey participants were asked what the most significant piece of

information they learned during their stay in the protected area. Of the 136 respondents, 40 (29.2%) indicated that they did not learn anything. A further 61 (44.52%) of tourists, indicated insightful or observable things such as forest beauty or cool climate. Although these are things which people have learned, they were not based upon interpretive communication, and generally not profound concepts. Respondents which indicated that they gleaned information from interpretive sources represented 36 (26.28%) of those interviewed. Typical of things that this group learned would be ecological concepts, habitat fragmentation, historical significance of the area, and conservation requirements of Thailand's ecosystems.

Where interpretation in protected areas is developed, visitors gain knowledge through their use. Most of the persons which indicated that they learned things through the interpretative services, were found in DINP, the park which offer the greatest interpretive opportunities in northern Thailand. In DINP (Table 5.10) 30 persons indicated that they had learned something through the interpretive facilities. This represents more respondents than persons which had learned nothing or learned through observations and insights at DINP. No other protected area had a ratio which could match this level of interpretive learning (Table 5.10).

Table 5.10 : Methods which visitors to various parks gained knowledge among protected areas.

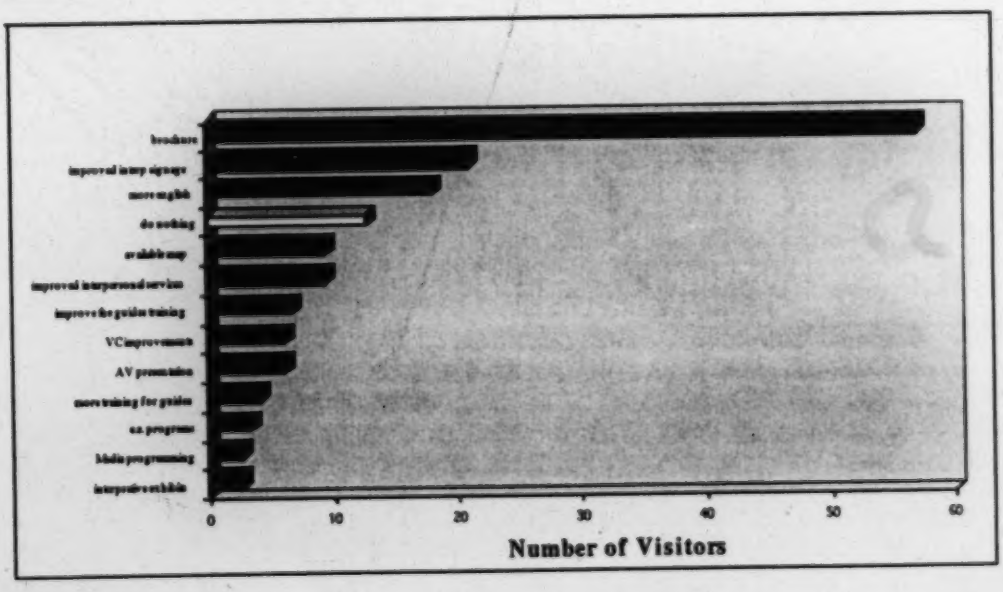
	Interpretation	Observation/ Insight	Nothing Learned
DINP	30	15	16
DSNP	1	15	7
JSNP	1	8	3
OLNP	1	8	1
TL	3	13	10
DKNP	0	2	0
Total	36	61	40

5.4.5: Visitor recommendation for interpretation

Question 31: "How would you improve the information presented to you?"

When survey participants were asked to recommend ways in which they would like the interpretive programs improved, the answers provided were very diverse. The most commonly given suggestions to improve the protected areas interpretive or information services was to provide brochures or pamphlets (Figure 5.5). Less people suggested an improvement in the interpretive signage, and 18 foreigners suggested to provide more English media in the parks (Figure 5.5). Nine other suggestions were given by less than ten individuals. 'Doing nothing' to the interpretive programs was the fourth most common answer provided given by 8.67% (13 / 150) persons surveyed (Figure 5.5).

Figure 5.5: Recommendation of park user for the improvement of interpretive services (n=150).



5.5 Summary

The high level of education, and professional employment among visitors to protected areas is similar to other studies involving the socio-economics of ecotourists in Thailand and elsewhere (Wauer 1980, Butler and Fenton 1987, Hvenegaard et al. 1989). Our survey was conducted on more men then women. This unequal bias represents a widespread trend in Thai society in which the male is often the representative in a couple. The fact that researchers were foreign males may have played a role in a woman's unwillingness to participate in a interview, as many Thai women are shy to foreign males.

A large majority of those surveyed (81%) were between the ages of 19-40. This age group seemed dominant type which used protected areas in northern Thailand, and also the most accessible and willing to participate in our surveys. Many of the surveys were conducted in national parks which were easily accessible in a day trip from Chiang Mai. Many students took advantage of this, and were also eager to participate in the research. Foreign travelers were also mostly under the age of 40. Much of our study period did not overlap with the typical holidays experiences in western countries, and therefore those foreigners we encountered from September to early December were generally young persons on extended travels. Many foreign tourists who were over 40, were unable to participate in our survey as their time commitments did not allow for a time consuming survey.

Our survey population therefore does not accurately represent a random cross section of visitors to protected areas, as foreigners, men, and the 21-40 age class, are all likely over represented to a degree. This survey does, however, represent a section of the age, gender and nationalities that visit protected areas.

Natural features were overwhelmingly considered important or very important by a large majority of those surveyed. Wildlife viewing opportunities was considered the least important of all the presented features, however these were still considered important by more than 65% of the surveyed population. Persons which considered this activity not

important justified their response in a number of ways. In the areas surveyed there was little evidence of charismatic wildlife such as deer, monkeys, and large birds. There were considerable number of species of songbirds, insects and other 'less charismatic' species of animals, which may contribute to the public's lack of importance given to wildlife viewing. Although they may not have been interested in participating, frequently those persons indicated that they were satisfied simply in knowing that wildlife existed in the area.

The aspects which visitors indicated they most liked in the protected areas were; natural features, climate, scenery, forests and faunal elements. These are all areas in which improved interpretive services could compliment and contribute further to the satisfaction which visitors already experience with the features. Similarly, interpretation can positively contribute to features which are not currently appreciated by protected area users. By developing these programs focusing on excessive garbage, crowds, and poor information, managers can improve the visitors experience. Although a large number of respondents indicated to researchers that they had no dislikes during their visit to protected areas, this data can be viewed in a number of ways. They may mean that there is nothing they have found fault with. Although this is no doubt true for a number of users, a number of those surveyed might have given this response for another reason. Thai people tend to show a great amount of respect to organizations in government, and they are not prone to be critical. This respect and lack of criticism is very likely represented in the data, however the significance of these responses is indeterminable. Additionally, because of the limited time frame, persons surveyed may not have been able to identify a criticism. Given enough time, it is likely that all persons interviewed could produce at least one criticism of the area.

Favorite experiences which were mentioned by those surveyed reinforced the importance of natural features to visitors to protected area. There were several important differences between the experiences in which Thai and foreign travelers favoured. Thai

NOTE TO USERS

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understand the nature of an interpretation sign. Thai persons, in particular, commonly did not recognize the different function between directional signage, and interpretation signage. This confusion may be explained as a result of the lack of interpretive signs in Thailand, especially those of high standard. Without the experience of knowing what an interpretation sign represents, visitors may not be able to recognize it from another sign type. Regardless of this, signage is eagerly used by all tourists to the park, and the addition of high quality interpretive signs would be used by the public visiting the park.

The most useful interpretive service as indicated by those surveyed was the interpretive trails. These trails enabled persons to enter the forest and "touch nature". This was a very powerful experience for most of the visitors to the parks, and once in contact with nature, their curiosities seemed to be heightened.

Foreign tourists found the interpretive resources less useful than Thai users. Foreign tourists may have previous experience with interpretive services from travels in other countries, and therefore may compare the quality of the services in Thailand to the facilities elsewhere. Foreigners may be critical of Thai services because they appear superficially less professional and the materials are not of as high quality in comparison to Western parks. Thai visitors, who have likely not traveled as extensively as foreign park users may not have been previously exposed to a variety of interpretive services and therefore have little personal experience to draw comparisons. Thai people also tend not to be critical of facilities and services, especially those operated by the government.

Only 19% of those surveyed indicated that the interpretive services contributed to their understanding of the site. Typically the subjects in which the tourists indicated that they learned through direct observation represented the early stages of the general model of the interpretation-protection interface (Butler pers. comm). Persons who visit areas bring with them their previous experience, and if experiences involve similar situations, visitors are more likely to draw meaning from personal observations. A problem with the reliance on these experiences is that few people visiting the protected areas have strong

backgrounds in the appropriate fields, and as a result few visitors who do not interact with the interpretive facilities learn the important themes of the protected area. What people observe tend to be superficialities, which contribute minimally to informing visitors of protected areas values. The largest segment of those surveyed indicated that the interpretive services were of little educational value. This clearly suggests that the current interpretive information is not effective at contributing an increase in awareness and understanding of protected areas, to a large segment of the visiting public.

Where interpretive facilities have been initiated, more persons learn through them. In DINP, a far greater number of tourists indicated that they had learned something through the interpretive services in comparison to other parks. The subjects which were related to researchers in DINP, reflected this tendency, as they tended to be more profound and indicative of the park's theme. Visitors that interacted with interpretive facilities indicated that they had learned about the management issues concerning loss of biodiversity, and the development threats both within and outside of the national park. These previously informed visitors may demonstrate the objectives shifts, from learning and awareness to behavioural changes, corresponding to the higher levels of the general model of the Interpretation-Protection interface (Butler pers. comm).

A large majority of visitors surveyed recommended brochures or pamphlets be made available in protected areas and suggested that the interpretive signage be improved. Few persons suggested the improvement of personal services within the protected areas. This may suggest that those surveyed would be indifferent to an increased level of personal services, however several factors may be responsible for this result. Thai persons, who may have never experienced quality personal services in protected areas, might not expect these during their visit to a protected areas. Foreign travelers who speak no Thai, may choose not to rely on personal services because of the language barrier. Foreigners correctly assume that few persons in protected areas in Thailand speak English, and therefore may rely on non-personal services for their information needs.

Results from a survey of 150 protected area users suggest while current usefulness of interpretive services is low, visitors continue to show a high desire to gain knowledge in protected areas.

Chapter 6

Professional perceptions towards Nature Interpretation

This chapter assesses the existing interpretive services in northern Thailand, through discussions and interviews with professionals with interest and expertise, in interpretation and protected areas management.

6.1 Methods

The in-depth interviews were conducted in a discussion setting. Many of the questions followed a prescribed routine, however site specific, experience and job related questions which generated out of the discussion, were posed. Because of this flexibility in questions, no two in-depth interviews followed the same regime. In some instances, events which developed during our study period contributed to this discussion. As the research was ongoing we were able to probe deeper into the subject through discussion with various people. Interviews were recorded by written notes, and by tape recorder if appropriate. The primary data is qualitative; quotations describing how people feel, and what they think about the subjects raised. By approaching a wide group of persons who have experience and interests in protected areas, the natural world, and communication strategies, it was anticipated that the appropriate information would be obtained for determining the effectiveness and potentials of interpretive services in parks and protected areas. This would also provide an opportunity to establish any problems or deficiencies associated with existing activities, and to touch upon subjects that cannot be broached with a survey or other sampling methods.

A number of different groups were approached, including:

- academic staff and students;

- members and leaders of Non-Governmental Organizations;
- employees of national parks and protected areas;
- foreign volunteers in national parks;
- private tour operators;
- local concession holders;

Most interviews were conducted with Thai persons with little or no understanding of English. Translators enabled researchers to communicate with those questioned, however there were limitations to this style of discussion. As the translation process is slow, both questions and answers were shorter than might have otherwise been, and the quotations acquired reveal this brevity.

6.2 The state of interpretation in northern Thailand

One of the initial requirements when conducting interviews was to determine why interpretive services have been implemented in Thailand. Steve Paglia with the US Peace Corps in JSNP, placed the current state of the interpretive programs in national parks in a sequential context. Paglia emphasized that the interpretive programs and facilities are now being viewed as a management objective by the officials to assist in conservation, where past efforts failed.

> *"The first thing that was tried in parks was protection...now that they saw that protection didn't work the next thing they are trying is environmental education and interpretation."*

The use as education programs in the promotion of conservation is a rational approach to management problems in protected areas in northern Thailand. This strategy, however, is not universally recognized by all the persons working in protected areas. Mr. Chodok the Assistant Superintendent DINP, gave two reasons why interpretation exist in his park.

1) to introduce visitors to nature

2) to fulfill orders from national park senior officials whose priority is the instillation of visitor centers in all national parks.

Chodok doesn't mention the conservation mandate of communication programs, and indicated that the initiation of interpretation (in the form of visitor centers) is being directed from the RFD senior officials down to individual parks. Thailand's bureaucratic structure follows a top down approach, and when high ranking officials declare a project as a priority, it is initiated and implemented often without question. However, if the persons on site are not made aware of the reasons behind the development of interpretive facilities, their effectiveness may be compromised. No senior ranking RFD officials were interviewed, however whatever their plan, it does not seem to have a wide understanding among staff at lower levels.

Many of the officials whom we spoke with in national parks continue to view interpretation in part as a tool to control visitor behaviour. It was suggested by several park officials that adherence to rules would be the end result of an integrated interpretive plan. This narrow view of interpretation neglects the artistic element in the communications strategy, which has proven successful elsewhere. Mr. Rawat Nanta's vision of interpretation, is typical of this 'law and order' view. He believes that education is required primarily so that visitors respect and learn the rules of the park.

Higher aspects of the continuum of interpretation, such as understanding, appreciation and respect are recognized in part by some park managers and persons in the field of protected areas management. Mr. Anothai Peankhongchon the assistant superintendent JSNP stated that "parks need interpretation so that tourists can understand the history, the story, and the importance of the park". Miss Somprai of DSNP echoed this statement, adding that she "wants to teach about the park so that tourists learn about the importance of the park to save it for the future." These statements clearly indicate that a portion of persons in protected areas recognize the value of interpretive programs, and that

certain people in protected areas recognize the ultimate levels of the Interpretation-Protection Interface (Veverka 1994) of love and preservation.

There is perhaps no one in Thailand who has contributed more to the evolving philosophy and objectives of protected areas management than Dr. Chettamart Surachet from Keaserstart University. He has influenced many decisions involving protected areas management in Thailand, and is quick to promote the value of interpretation in these areas, but is quick to add that implementation is slow. Surachet remarked that "the most important thing for protected areas tourism in Thailand are the interpretive programs, but we are only at the beginning stages of interpretation." He believes that the national parks can influence the conservation ethic of Thailand and "change attitudes of Thai people through education and interpretation." Surachet thoughts were echoed by Mr. Buntoon, a public relations ranger, who has started interpretive and environmental education programs in Doi Suthep-Pui National Park. He realizes the importance of interpretation to the overall management and conservation of protected areas and that "the most important thing for Ecotourism in Thailand is the interpretation of parks by rangers."

Buntoon, Surachet and others, view interpretation and education of protected areas users, as a means of contributing to and expanding the conservation ethic in Thailand. They hope that through communication, visitors will foster an understanding of protected areas which will ultimately lead to their preservation.

6.3 Limitations to interpretation in northern Thailand

6.3.1 Budget and training

Although a diversity of topics were touched upon over the course of our interviews with protected area officials, invariably two primary concerns arose among most of the interviewees: budget and training. Most managers acknowledged the need for interpretation, however they often hesitated at the next level: implementation. National

parks in Thailand have limited budgets, and since interpretation is not as high a priority as maintenance and protection, it often receiving little, if any, money. Mr. Chodok in Doi Inthanon, stated that he is willing to construct interpretive signs, but the lack of money and expertise in design, stalls its initiation. Chodok also shows a mistrust of certain tourists, and is concerned that new interpretive facilities will be exposed to vandalism and theft, thus costing more money to the park in the long term. He is not yet convinced that improvements in the interpretive infrastructure will be more beneficial to his park, than the features now considered of higher priority.

Mr. Kriengsak Chaturasuksakul of Ou bon La Chatami ERDC Center, conducts training seminars for staff in protected areas throughout Thailand. He focuses on training existing staff to become more receptive to park visitors, and teaches basic interpretive techniques. His seminars appear to be positive, short-term initiatives. Steve Paglia, however was not convinced that these exercises were a complete success.

> *"Within the royal forestry department they plan to have every park (staff) go to the environmental training center for ten days (and learn) how to teach kids how to walk through the woods...but there is no follow-up, no reinforcement... you go for ten days and then you are on your own."*

Generally the staff that attends these seminars are rangers and public relations staff. These employees are usually quite a distance from the hierarchy of the park management, and generally have limited academic training. Chaturasuksakul realized that the seminar he conducts does not fully instill confidence in the staff. He feels that because of their lack of education and low social status, staff are intimidated to speak with visitors.

> *"It is very difficult to upgrade (existing park staff) to be interpreters, because they are unsure of themselves. They don't have enough knowledge. They are afraid that tourists will know better than them."*

To overcome this dilemma, various officials suggested beginning to train students at the university level in interpretation, so that once they graduate they will have the skills to confidently interpret a park's story. Several suggestions were also made to employ

university students as interpreters in national parks during their time at school in co-operative programs, or during their time between sessions. Currently no university level students are employed as seasonal interpreters, and no protected areas we visited had any staff formally trained in interpretation. Courses in interpretation at the post secondary level are not currently in place, but it was suggested by Dr. Numchai at Maejo University to incorporate this theme within the Ecotourism curriculum. Even park managers who tend to have an university education have little training in communication strategies. Dr. Surachet suggested it is being overlooked by current park managers because few people in the parks were trained in interpretation. According to Dr. Surachet, most of the senior officials of the national parks and RFD have received their education in the Faculty of Forestry at Keaserstart University, where there is little or no training in interpretation. Maejo University is currently offering a MAFA (Master's of Agroforestry Administration) degree. This program involves a trip to protected areas in other countries where the objectives and principles of protected areas management, including interpretation, are impressed upon the students. During a MAFA trip to Jasper and Banff National Parks Canada, in which I participated during June 1997, the students were generally very impressed with the interpretive facilities featured in the parks. Interpretive signs and visitor centers investigated by these students were met with great interest; many of the students photographed the facilities in order to incorporate elements of design into their protected areas. The visits were brief, however, and provided little more than a superficial view of Canadian park management. These students did not fully recognize the personal services which support the interpretive infrastructure in these protected areas, and may have left with the impression that nice signs and buildings are all that is required in an interpretive plan.

In spite of the apparent benefit of training staff in interpretation, a number of protected area managers suggest that it may not be in the park's interest. Mr. Chodok suggests that trained interpreters will not remain in national parks once they have completed

their education, because "specialized guides tend to work for private tour companies who can pay more money than national parks." This suggestion seems to have some basis as it was supported by a private Thai tour guide, 'Tim' who was schooled in part, outside his country. He suggested that protected areas;

> *"...are destined to have poor guides and interpreters because the money they receive is so low. If they improve their English and their knowledge levels they will likely seek out better paying jobs in Chiang Mai leading foreigners for greater money."*

6.3.2 Behaviour of park users

Persons consulted over the course of this study frequently commented on the differences between the use pattern of Thai and foreign visitors to interpretive facilities and protected areas in general. Managers were challenged by the differences that they had observed over time, and often seemed frustrated by the ethics of Thai users, in comparison to foreign park visitors. While most protected area managers do not go as far as Mr. Rawat Nanta who suggests that "Thai tourists never respect the rules of the park" many indicated that differences in attitudes were reflected in the type of activities in which they participated. Steve Paglia noted:

> *"Thai people see these protected areas as just parks, somewhere to come and relax, garbage will be picked up by workers. They don't want to have to think... I think that the Thai people coming up here from Bangkok to drink whisky and hang out, really think that is seeing nature.. .and I don't even think they know that it's a problem."*

Much of the attitudinal difference noted by managers involved the use of the available interpretive opportunities. Tam Huipontong a public relations ranger in Doi Khuntang National Park, insists that "every foreigner stops at the visitor center" while a much smaller percentage of Thai people stop and request information. Anothai Peankhongchon suggests that "Thai people don't understand the reason for a visitor

center" because these facilities have not been in place long enough for them to realize their benefits. Steve Paglia expands on this suggestion.

> *"Westerners are used to the visitor center being the main focal point of the park, its the first place you go to when you go to a park, while in Thailand this is not the case."*

Mr. Sathit expressed some frustration in the lack of use in the new visitor center in OLNP. He suggested that sign outside the visitor center may not clearly state the intended purpose of the building. The Thai translation of 'Visitor Center', is 'Center for Serving Tourists' (Plate 3-c). Mr. Sathit suggested that Thai visitors may not view themselves as 'tourists', and therefore not think of entering a center intended to serving tourists. Mr. Sathit indicated that 'visitor' would be a more appropriate term as 'tourist' may imply a foreign visitor. Mr. Sathit also suggested that Thai visitors may not approach the building because it looks too new, and that visitors may simply conclude that the building is intended for the staff of the park. He indicated that Thai visitors tend to think that the nicer buildings are intended for officials, while the more run down facilities are intended for the general public. Mr. Sathit suggests that the park must do more to invite people to the building by using signs and personal invitations.

Anothai Peankhongchon repeatedly stated the need for improved interpretive signage. Following a recent MAFA field trip to the U.S., he concluded that in Thailand "important interpretive themes of the park are not explained as well as they are in America. There they have many permanent interpretive signs, while we have very few." Managers in Thailand's protected areas must not be overly drawn to the development of interpretive infrastructure, because without personal services to reinforce these, the physical structures may not fully meet their potential.

6.3.3 Conservation ethic

Although many officials that work in protected areas management would agree that Thai visitors may not yet have developed a refined conservation ethic when visiting protected areas (Plate 4-c), they suggest that interpretive programs will contribute greatly to

its evolution. Mr. Pravat, Superintendent of DSNP indicated that "Thai tourists, with their white clothes, come only for the wat (temple),... but interpretation will give these visitors other options in the park." Dr. Surachet also acknowledges the present state of Thai visitation patterns, but foresees a change occurring. Surachet indicates that Thai travelers to parks "now appreciate the experience but not the environment, they simply go to enjoy themselves" but he adds that within 10 years, parks can "change attitudes of Thai people through education and interpretation." The reasons Surachet is confident of this is that he insists that the "education component is high for Thai people (and that) they willingly participate in interpretation, so long as it is free."

Mr. Virichai the director of the Queen Sirikit botanical gardens near Chiang Mai has already noticed this shift in attitudes that Surachet pronounces. Virichai states that "Thai visitors are becoming increasingly sophisticated." Virichai notes that these tendencies can be observed in the increasingly academic questions being posed by tourists, and in the fact that more of the tourists he sees in his park are bringing cameras to photograph species of rare plants (Plate 6-d). Virichai's botanical garden is, however, an anomaly among protected areas in Thailand, as it has been able to develop a very high standard of facilities and interpretive services, since the gardens are named after the HRH Queen Sirikit.

6.3.4 Corruption

Perhaps the most serious concern raised by persons interviewed, which limits the effectiveness of protected areas in northern Thailand, seems to be a fundamental problem with the political and bureaucratic system. Private tour companies, NGO's, and park staff all hesitantly spoke 'off the record' of the problem of corruption. Persons with whom we spoke, often requested anonymity, as they feared for their jobs, businesses, and in some cases the well being of their families and themselves. Illegal logging, hunting and poaching of trophy animals and plants in protected areas are activities suggested to be driven primarily by governmental officials. These illegal acts, with the promise of big money, are often undertaken by locals. Individuals, initiating the poaching activities are

often influential and ensure immunity to prosecution to not only themselves, but also to the poachers. In one park, a worker explained that weapons and snares were repeatedly confiscated within several hundred meters from the administration building. According to a national park ranger "corruption with high ranking officials is the biggest problem with conservation and protected areas" not only because it destroys the integrity of the park, but because of the isolationism in which these officials must operate. In order to be able to conduct these illegal activities, they must be done without the knowledge of the people. It was suggested that certain managers purposefully limit the public availability to areas of their park, so that illegal activities can proceed unnoticed. There was undeniable corruption present in some of the sites surveyed in this study. However in those protected areas which featured enhanced visitor programs and facilities, the opportunity for illegal activities by corrupt officials appeared to be limited. It was suggested by several of these sources that the increasing demand of visitors to information and access in protected areas, limits the opportunity of illegal activities. The use of educational programs therefor can contribute to the reduction of illegal activities by altering the context in which corruption operates.

6.4 Proposed solutions

6.4.1 Local persons

A possible source of knowledgeable and affordable staff may lie in the form of local villagers. Jae Sorn National Park has hired a former poacher as a security ranger. He has shared much of his traditional knowledge with Steve Paglia in the park. Both Paglia and Santi Sompsart believe that in hiring poachers as rangers and guides, the park will reduce the illegal killing of animals in the park, create better alliances with neighboring villages and instill pride into local customs and knowledge, through the process of sharing these with park visitors. Dr. Surachet, when speaking of poachers and local villagers, suggests that protected area mangers should "educate them on how to be local guides."

Poachers frequently are local persons with little formal education, deep roots in the area, and are therefore not as likely to leave the security of their family and village for the foreign tourism market in Chiang Mai, once trained. Local hiring and training has been used effectively by a private ecotourism operator, based outside Khao Sok National Park, in southern Thailand (section 10.3.1) and at Tham Lod cave (section 10.4.1). Local persons can be excellent ambassadors for protected areas through personal services offered to the public. Although they would require some training, local persons offer regional experience and may have more of an emotional attachment to the area than someone from elsewhere. Thus far, the potential for using local persons and their knowledge to communicate to park visitors, appears to have been largely unrealized.

6.4.2 Royal Forestry Department Officials

Mr. Chaturasuksakul conducts training courses for national park staff, but recognizes the limitations of these training sessions. One of his main concerns is that in spite of this best efforts to impress upon staff the values of interpretation, the structure of protected area management requires the involvement of senior officials, which he rarely sees at his symposiums. Chaturasuksakul suggests the involvement of these officials in future sessions to improve the implementation and effectiveness of interpretive programs.

> *"Right now we only train the lower staff in interpretation. Maybe in Thailand we should have a school for national park chiefs, because in our national parks, the chief is the one man who decides things. If the chief wants to have interpretation they will, if he is not interested they won't."*

6.4.3 Managing Interpretation

The former Superintendent of Khao Yai National Park, Mr. Vallobh Sukont stated what he believed to be the fundamental problem in Thailand's protected areas;

> *"no environmental ethics or customs have yet to develop in Thailand towards protected areas. It is customary for instance to remove ones shoes prior to entering a house, national parks do not yet have such customs."*

Sukont believe that the solution to creating an environmental ethic lies in the communication of information stressing;

> *"Give them knowledge and they will conserve with their mind and their conscience."*

Many other officials in protected area shared Sukont's suggestion that interpretation and environmental education of visitors to parks will contribute to the conservation ethic and ultimately to the preservation of natural areas. The strength in Mr. Sukont's comments lies in the realization of the duality of the mind and the conscience. Bowon Lararee shares this opinion stating "when tourists get knowledge they become conservation minded." Tam Huipontong also supports the notion that "interpretation will open the minds of the visitor to nature" and Mr. Virichai, suggests that the most effective means of communicating is to "educate them (the visitor) by not forcing them to understand." The educational component of protected areas management is therefore recognized as a productive means at accomplishing management strategies by some within protected areas. Mr. Buntoon sees even beyond this reality, hoping that one day rangers in Thailand be versatile enough to "be able to interpret the park's story through a small pebble."

Many officials stressed that whatever the direction in which interpretive services are presented they should be shared primarily through personal contact which are widely regarded by professionals throughout protected areas as "the most important thing for effective interpretation". Thai people are very social and they react strongly to personal communication. Dr. Surachet suggests that "personal communication is the best way to communicate with tourists, because interpreters can answer all the tourists questions." He suggests that a staff member should offer a warm greeting to tourists visiting the protected areas, making them feel welcome and appreciated. Chaturasuksakul adds that a problem which may contribute the lack of personal contact now present in protected area lies in Thai customs. It is customary in Thailand for those with a low social standing to acknowledge

those superior, and officials in protected areas often have a relatively high standing which often leads to no greeting to visitors with lower social status. Chaturasuksakul suggests that this is a genuine problem. However, he stresses that training can result in the elimination of this culturally based behaviour .

Much of the most recent and imaginative interpretive efforts are being concentrated on young people through a few environmental education programs such as the ones at Doi Suthep-Pui National Park. Day camps expose students from Chiang Mai to such ecological concepts as food webs, conservation, the circle of life and ethnobotany. These concepts are interpreted to the students using a variety of methods such as hand's on activities, games and songs. As Chaturasuksakul explains, school children are approached because "the first time you love someone you will love them always, if we can teach students to love nature they will love it until they are old." Unfortunately, few specific ideas were offered to effect change among the adult sector of Thai society. There appears to be a hesitation among protected area staff to approach adults with these concepts, because they feel it is too difficult to change an adult's perceptions of things. Paglia suggested that the target audience for interpretation-based conservation ideas should be directed by Thai citizens to those that live in urban areas.

> *"If you want to start environmental education in Thailand you have to start in the cities...people who don't have to rely on the forests are the easiest to influence... Conservation is an urban movement, you've got disposable money, you've got people who are highly educated. You need them coming out to the north or to the northeast, its gotta come from Thais to teach Thailand. It can't come from us (westerners)."*

Others supported Paglia's comments, suggesting it would be inadvisable to use communication strategies for Thai people adopted directly from Western countries. The interpretive programs ought to be designed by people who understand the motivations and backgrounds of the people. These programs would greatly benefit from slight modification from established Western examples, to suit the regionalized cultural and social elements present in the area. Mr. Sathit suggests that spiritualism might be an avenue for

environmental education in Thailand, "Both villagers and tourists respect Buddhism over officers, so this would be an effective way to promote education of the park." Paglia has also noticed other cultural mannerism which may be effective in promoting environmental awareness. He suggests exploring folklore and superstitions of Thai people to promote a deeper understanding of reverence and respect.

> *"Here they have Doiwitchai 'Magic eyes', if you throw garbage the spirits eyes will see you, (Tais) believe in ghosts, a pair of magic eyes are everywhere so if you throw garbage or do something bad the eyes will see you."*

Thai people also have reverence for a number of high profile environmental spokespersons. Princess Chulaborn, Dr. Boonsong Lekagul, Seub Nakasatien are all greatly respected for their environmental initiatives and leaderships. Paglia suggested incorporating these respected persons into conservation themes in interpretive facilities. Although these may be tailored to suit the peculiarities of Thai culture and society, this unique communication approach would undoubtedly be of great interest to foreign users of protected areas as well. Many of the foreign travelers to protected areas are attracted to the unfamiliar, and interpretive facilities and services which explore a regional Thai vision may be more of an attraction than conventional designs.

Chapter 7

Assessment of selected interpretive media

This chapter analysis selected interpretive facilities, and assess their effectiveness through the use of established criteria. By using standardized equations, the effectiveness in which written information is presented may be determined.

7.1 Methods

7.1.1 Flesch's Analysis

Signs, brochures, exhibits are among the most frequently used interpretive media in many of northern Thailand's protected areas. An assessment was conducted to determine their content, design, and usefulness to park users. Signs and brochures were analyzed for consistency both in and among various protected areas. The English text of these service was also checked for relevance of information, and correctness of spelling and grammatical usage. Selected signs, and brochures were analyzed for readability in accordance with the objective of these publications, to orient and educate visitors. Analysis for Reading Ease and Human Interest were conducted following the formulae developed by Flesch (1949), as recommended by Medlin and Ham (1993). Both interpretive signs and park brochures were analyzed using both of the Flesch models. The entire text of signs was used. Because of the length, only every second paragraph was used in the brochures to determine readability and the human interest levels. The analysis of brochures and interpretive signs were conducted only on the English text.

7.1.2 Assessment of the Bird exhibits of Doi Inthanon NP

Birdwatching is a major attraction to Doi Inthanon National Park (DINP), it was determined to compare the species of birds profiled in the summit visitor center exhibits,

with those species visiting birdwatchers find particularly interesting, and desirable in the park. All bird photographs and other related items were inventoried from the exhibits at the summit visitor center in DINP. These included species names, photographs, and the frequency of their occurrence in the exhibits.

Park users whose primary reason for visiting the park was to birdwatch were approached and asked to provide a list of their "Personally most important birds in DINP". Two birdwatchers in the pre-test provided 10 species, but this list was reduced to 6 birds as a list of 10 appeared too difficult for some. Many of the birdwatchers spoke only Thai, and the communication of bird names was problematic and time consuming. Each birdwatcher thereafter provided a list of 6 birds by either giving the species English name or pointing to the appropriate species in the "Birds of Thailand" field guide (Lekagul and Round 1991).

This list was also tallied with species and the frequency in which they were mentioned. Both lists were compared to assess how effectively the bird-related exhibits coincided with the interests of birdwatchers visiting DINP.

7.2 Results

7.2.1 Brochures

Brochures are highly regarded by visitors to protected areas as important sources of information. Although they may not currently be widely available, their usefulness is recognized, as participants in our survey instrument indicated that brochures should be made available to interested visitors (section 5.4.5). Much of the current design and layout of existing brochures, follows examples of park brochures found in the United States. The assistant superintendent of DINP produced the brochure from Yellowstone National Park and suggested that the design and layout for his parks' brochure was greatly influenced by the North American example.

The brochures have a professional quality to them and have a consistent design theme among national parks (Plate 3-a). They are printed on high quality, glossy paper which reproduces photographs and maps very well. National park brochures are of a convenient size (10 cm X 21 cm: 4'' X 6'' when folded) and present the various attractions within the park, through the text and photographs. All brochures featured the national park logo, a colourful panoramic cover, and all but one featured the park's name in both Thai and English.

The analysis of the park brochures (DINP, DSNP, OLNP, DKNP-Thai only), produced various grammatical and typing errors. The Ob Luang National Park brochure, in particular, was so filled with errors that in places the meaning of the message was difficult to appreciate, and extended to the park, a public perception of unprofessionalism. Some examples of errors from the national park publications are as follows:

> *"The water have to force it's way past rocks and boulders obstructing the course which is a magnificent sight."*
> -OLNP

> *"Thses forest harbours many important species like. Teak, Dipterocarp ssp., Mahagany etc. On higher altitudes Pine forest, both the two and treeleafed pine, occurs. Other vegetation types are grasslands and savannas, Orchids and other flowering plants are abundant."*
> -OLNP

> *"Deer, monkeys, macaques and over Zoo kinds of bird species are found, including cagles, jungle fowl, orioles, woodpeckers, and drongos."*
> -DSNP

Brochures from the three national parks scored moderately well on the Reading Ease scale (Table 7.3). The Ob Luang NP brochure, score the highest at 75.95. This high score reflects the use of simple language, non-technical words, and short sentences. These factors make these brochures more comprehensible to the visitor.

> *"The river created a big canyon which is called Ob Luang. The word 'Ob' means in the local language 'narrow' and the word 'Luang' means*

'big' and refers to the big but narrow canyon the river created over the years."
-OLNP

In contrast a confusing section scoring Low on the reading ease scale:

"Species with economic value include teak, mountain pine. Dipterocarp species, Xylia xylocarpus, Pterocarpus, Terminalia, and Lagerstroemia to name a few. In addition to these, their are many beautiful flowers including Vanda, phycastylis & rhododendron."
-DINP

All national park brochures scored low on the Human Interest scale (Table 7.1). The writing generally did not encourage the visitor to involve themselves directly in park activities, and made few references to personal and proper names with which visitors with few natural experiences could relate. A small section of the DINP brochure demonstrated the best example of generating interest and encouraging individual exploration. Note the use of personalized words such as "you" and that the message invites the reader to participate.

"On the main road and opposite the summit Ranger Station is a sign in Thai marking a short, self-guided nature trail which descends to a sphagnum bog in a small karst depression. The bog area, which displays the red-blossomed Rhododendron delavayi, comes nearest to a true montane forest formation and is good location for bird-watching. If you continue around the bog and down a short distance, you will reach a memorial site of a helicopter crash which occurred in the mid-seventies and killed the first superintendent of this park."
-DINP

Table 7.1: Evaluation of national park brochures.

Park Brochures	Reading Ease (/100)	Human Interest (/100)
Ob Luang National Park	75.95	2.919
Doi Suthep-Pui National Park	51.87	7.55
Doi Inthanon National Park	48.14	21.68

7.2.2 Interpretive signage

JSNP and OLNP were chosen as sites for these analyses because these were the only two parks which had a series of permanent interpretive signs. The signs within the park had thematic integrity, reflecting a common standard in design, layout, and style. The signs between parks, however shared little similarity in style and design, and none of the interpretive signs analyzed had identifiable national park logos. There was one interpretive sign, in JSNP which did display the park logo, however it was not chosen for this study, as it wasn't written in English.

All the signs analyzed for this study were well written in English and Thai. There were very few spelling and grammatical errors, to confuse visitors. The quality of English, and its comprehension in the interpretive signs, was equal or exceeded other signage experienced throughout Thailand.

The signs surveyed in JSNP were untitled trailside signs with one interpreting "Vines" (Box 7.1) and the other "Termites." Both signs were similar in style: white lettering painted on a cross-cut large stump. Parts of each sign were obstructed by encroaching vegetation, as the signs were lying just above ground level . No titles, logos, or illustrations accompanied the signs, nor did they show any evidence of vandalism or wear. A minor spelling error was noted on one of the signs, but otherwise the signs were well written.

The signs chosen at Ob Luang NP were the signs interpreting the "Pa Chang Cliff" (Box 7.2) (Plate 2-b) and "The Grave from the Metal period". Both signs were multiple post inclined panels, with metal-micro imaging design. These two signs were part of a group of three similar signs along the interpretive trail at OLNP. The signs were about a year old, and were target hardened to withstand vandalism and weather. Both signs evaluated at OLNP rated moderately well on the reading ease scale, but very poorly on the human interest scale (Table 7.2).

Box 7.1: Interpretive sign at Jae Sorn National Park.

Untitled Sign

Vines like this spectavular (sic) one in front of you use trees for support. What does this help the vine compete for? Space? Light? Nutrients? Water? Vines grow up the sides of trees clinging to them.

Box 7.2: Sign at Ob Luang National Park.

Pa Chang Cliff

The area around Pa Chang Cliff was ever a camp and ceremony site of nomadic groups of hunter-gatherers during the late stone-age from 28,000 years ago, until into the Metal age.

Mr. Sayan Prichanchit archeologist of the department of Fine Arts, discovered several ancient wall paintings and utensils made of stones, especially pebblestone in this area for the first time during a survey in 1983. He and two French archeologists Dr, Marielle Santoni and Dr. Jean Pierre Pereault, started a joint Thai-French project, and during excavations in 1986 more evidence of the hunter-gatherers were found in the area of Pa Chang. The finding consisted mainly of stone tools and a large amount of animals bone, and was estimated to be from the middle stone age. From test done with the tandertron method (carbon test) on the animal bone it can be said that the first group of nomads lived here about 28,000 years ago. This site, one of the oldest archeologist sites found in the north of Thailand. The wall paintings found at Pa Chang cliff are representing an elephant a person and many other symbols. The colors of the painting are dark reddish, black. and white. The paintings were made at this ceremonial site some 2500 -3000 years ago.

All the excavations, stone tools and animal bones are at present displayed at the national museum in Chiang Mai.

Box 7.3: Tourism Authority of Thailand (TAT) Sign at Ob Luang National Park.

Ob Luang National Park

The forested park takes its name from the two meter wide Ob Luang cliffs, situated on the narrowest part of the Mae Jam River. Prehistoric rock paintings have turned this into a prime sightseeing spot. Bronze edzes or cutting tools excavated in the surrounding area indicate that an established prehistoric community once live there about 7000-8000 years ago. Sightseer who wish to take snapshots of the Hod Mea Saring highway scenery, can tread on the suspended bridge which joins both sides of the cliff area.

Table 7.2: Evaluation of interpretive signs.

Interpretive Signs	Reading Ease (/100)	Human Interest (/100)
"Pa Chang Cliff" (OLNP)	51.12	4.80
"The Grave from the Metal period" (OLNP)	60.59	5.27
TAT Sign (OLNP)	56.88	16.39
Untitled "Termites" sign (JSNP)	67.83	14.98
Untitled "Vines" sign (JSNP)	95.79	32.80

The interpretive signage in JSNP scored very well on the Reading Ease scale with the "Vines" sign recording the highest score (95.84) of all signs that were evaluated in northern Thailand. Both signs rated poorly on the human interest scale scoring (14.98 and 32.80)(Table 7.2).

Many of the protected areas in northern Thailand had Tourist Authority of Thailand (TAT) signs at or near the main entrance or near focal area of parks. This government agency, independent from the national parks, has erected signs with similar styles and designs throughout the country. These metal signs are easily recognizable as they are always green, double posted panels, sporting the TAT logo (Plate 1-a). These signs are very well written, and the most 'professional' and consistent looking signs in the national parks. Tourist Authority of Thailand signs do have limited interpretive value, as they orient the visitor to the primary attractions of the protected areas. Tourist Authority of Thailand signs feature very few factual, grammatical or spelling errors. The TAT sign at OLNP (Box 7.3) was typical of TAT signs elsewhere. The Reading Ease component of the sign scored moderately well (56.88), while the human interest component of the sign rated very poorly (16.39)(Table 7.2).

7.2.3 Birds of Doi Inthanon NP

With over 380 bird species recorded within its boundaries (Taylor 1993) birdwatching in DINP consists one of Thailand's primary wildlife viewing opportunities. Thirteen visitors, whose primary purpose for visiting the park was birdwatching, were asked to provide their most personally important bird species in DINP. The lists of birds that were generated were compiled by birdwatchers based on their desire to see the bird, and other ecological or conservation criteria that the individual considered important. Fifty different species were given by the 13 different birdwatchers (Table 7.3). Sixteen of the 50 bird species were recognized by more than one birdwatcher, and the green-tailed sunbird (Plate 4-a) was recognized as being an important bird in DINP by 10 of the 13 birdwatchers surveyed.

A total of 26 different bird species were highlighted in the summit visitor center. Of those 26 species that were illustrated in the visitor center, only 9 overlapped with the list generated by birdwatchers at DINP (Table 7.4). Forty-one birds listed as desirable species by birdwatchers in the park, were not included in the exhibits. Sixteen species not included on the birdwatchers list were illustrated in the exhibits at the summit visitor center. Some species that were featured in photographs in the visitor center exhibits do not occur within the park.

The green-tailed sunbird, an easily observable species that frequents the immediate area surrounding the summit visitor center was the bird which appeared most frequently (4 times) in the visitor center's exhibits. This attractive and approachable bird was also the most important species mentioned by birdwatchers.

Table 7.3: Species of birds which appeared in the exhibits in comparison to those recommended by birdwatchers.

	Birdwatchers Birds	Times mentioned by birdwatchers	In exhibits in summit visitor center
1	Green-tailed Sunbird	10	√
2	Chestnut-tailed Minla	6	√
3	Chestnut-crowned Laghingthrush	4	
4	Silver-eared Mesia	4	√
5	Yellow-bellied Fantail	4	√
6	Yellow-cheeked Tit	4	
7	Gould's Sunbird	3	√
8	Oriental Whiteye	3	
9	Black-headed Sibia	2	
10	Black-tailed Crake	2	
11	Brown Wood-Owl	2	
12	Cutia	2	
13	Golden-throated Barbet	2	
14	Lesser Racket-tail Drongo	2	
15	Minivet *spp.*	2	
16	Rufous-winged Fulvetta	2	
17	Ashy Drongo	1	
18	Blue-winged Minla	1	
19	Buff-bellied Flowerpecker	1	
20	Chesnut Thrush	1	
21	Chestnut-bellied Thrush	1	
22	Chestnut -flanked Whiteye	1	
23	Chinese Whiteye	1	
24	Common Rosefinch	1	
25	Eurasian Woodcock	1	√
26	Giant Nuthatch	1	
27	Great Tit	1	
28	Green Cochoa	1	
29	Green Malkoha	1	
30	Grey Bushchat	1	√
31	Grey Wagtail	1	√
32	Grey-cheeked Fulvetta	1	
33	Grey-headed Flycatcher	1	
34	Grey-winged Blackbird	1	
35	Large Niltava	1	
36	Lesser Shortwing	1	
37	Maroon Oriole	1	
38	Plumbeus Redstart	1	
39	Purple Cochoa	1	
40	Red-tailed Laghingthrush	1	√
41	River Chat	1	
42	Rusty-naped Pitta	1	
43	Scarlet Finch	1	
44	Silver Pheasant	1	
45	Stripe-breasted Woodpecker	1	
46	Verditer Flycatcher	1	
47	White-bellied Pigeon	1	
48	White-browed Shortwing	1	
49	White-headed Bulbul	1	
50	Yellow-vented Flowerpecker	1	

7.3: Summary:

The style and design of brochures had high thematic integrity among the various national parks. By following the same design among parks, visitors recognize the purpose of the publication, orient themselves quickly and can plan their activities accordingly. Brochures also make excellent souvenirs for these protected areas, and also provide future visitors with an overview of the protected area. The text of the brochures rated poorly on the Reading Ease scale. The style, and composition of the English text in many cases was not thoroughly reviewed by someone fluent with the language. Consequently, many grammatical and typographic errors were present in places of brochures, that the text was difficult to understand. This deters English speaking tourists as their expectations are diminished when they encounter a publication which lacks professionalism. These basic editorial errors can easily be overcome, by having someone competent in the English language review the text prior to production.

Interpretive signs did not have a high degree of thematic integrity among and within protected areas. Few of the interpretive signs displayed the national park logo and signs similar in purpose, often were very different in style. The lack of relatedness among the types of signs within parks, may have contributed to a confusion of the purpose of the interpretation signage and its distinction from directional information (section 5.4.2). Visitors often did not recognize the different functions of interpretation and directional signage, perhaps because neither were visually distinct from one another. The content of the text of signs however, was fairly easy to read, rating moderate to high on the Reading Ease scale. Many of the signs analyzed were written by English speaking foreign volunteers, who wrote in simple, easy to understand sentences.

All interpretive signs faired poorly on the Human Interest scale. The writing style featured in both brochures and in interpretive signs would benefit considerably by referring to the principles and characteristics which lead to effective interpretation (Figure 2.4, 2.5). Written media should be direct and brief, provoking curiosity and relating to experiences

shared by the visiting public. Interpretive writing does not need to be full of factual information, rather a simple approach often enables people to discover and understand the message more clearly than if it is burdened by an overabundance of technical information. The interpretive writing in the exhibits and signs would improve if it followed the principles and concepts outlined in Chapter 2 of this thesis.

The bird exhibits featured in the summit visitor center at DINP, do not reflect and represent the species that birdwatchers consider important in the park. Aside from the green-tailed sunbird, which is recognized by the interpretive exhibits and by birdwatchers as the most noteworthy species, few other avian specialties of DINP are recognized and featured in the interpretive displays. As birdwatchers represents a specialized and demanding user group in the park, the information provided by the park should contribute to their experience. Currently the interpretive facilities are of little use to visiting birdwatchers. They tend to arrive in the park with information from other sources, or receive information from Mr. Deang (section 10.2.1) a private concessionaire in the park. Several birdwatchers with whom we spoke, indicated that they assumed there was nothing that would be of value to them, in the summit visitor center. None of the birdwatchers that were approached, indicated that the respective park's interpretive services were of great benefit in their birdwatching trip. Visiting birdwatchers tend to be interested in species which are localized in the park or species which reach their greatest abundance in the region. These species, and their primary viewing areas should be promoted in the park, and would also be ideal candidates to relate other management themes such as habitat loss, poaching, and fire starting, currently interpreted in other less effective ways in the park's exhibits. By facilitating the viewing of these species through the construction of blinds or 'sky'walks' specialized user groups would find more stisfaction and the protected areas would gain increased credibility within this niche user group.

The interpretive signs, brochures, and exhibits would greatly benefit from an increased understanding of the principles of effective interpretive communication. By

increasing the quality and relevance of the interpretive writing, and eliminating factual and editorial errors, the benefits realized through the communication process will contribute more greatly to the visitor's experience and to management objectives.

Chapter 8

Evaluation of visitor behaviours towards interpretive services

Chapter 8 examines visitor behavioural patterns, by monitoring the manner in which users interacted with interpretive facilities. This chapter along with chapter 9 form the case study which was conducted in Doi Inthanon National Park.

8.1 Methods

To gain a deeper understanding of the interpretive process, a case study focusing on the interpretive facilities and use pattern of park visitors was designed. The case study was undertaken in Doi Inthanon National Park (DINP). Study methods were based upon those proposed by Medlin and Ham (1993), and modified to suit this particular setting. The summit visitor center was the principle site for much of this case study, as it was determined to be the most visited interpretive facility in the park. Age, gender and nationality of users were recorded along with the specific objectives on specifically designed data sheets (Appendix D). In many cases, the visitors were not approached and indeed not aware of the ongoing study, therefore nationality and age assessments are subject to a small degree of error. Age of visitors was categorized in four different groupings: (0-20; 21-40; 41-60; 61+). Nationality was easier to determine as only two categories were used: Thai and Foreign travelers. Thai persons are readily identifiable, as oriental persons make up virtually the entire population of the country. Foreign Orientals (i.e.: Chinese, Japanese, Malaysians, etc.) posed the biggest concern, however Thais are physically dissimilar and speak a different language from other oriental persons. When in

doubt we consulted our Thai research assistants who could quickly ascertain whether or not the visitor in question was Thai or foreign.

8.1.1 Interpretive Sign Usage

Two different interpretive signs were comparatively evaluated. Along the Angka interpretive trail at the summit of DINP, there is a series of interpretive signs along a trail. The signs are labeled with broad titles, and the text (Thai only) is a laminated brochure, tacked to the railing of the boardwalk. As there is a series of 11 signs, the researchers drew randomly from this sample for which sign would be surveyed.

A single post, inclined panel, metal-micro imaging sign was chosen in OLNP for comparative purposes. This sign was also part of an interpretive trail. The sign was engraved upon a metal sheet and positioned in such a way to complement the feature in which it was describing (Plate 2-c). This sign was chosen because within DINP no such high quality signs existed for comparative purposes. The sign in OLNP was not randomly chosen. The interpretive trail at Ob Luang received little traffic, and since most people do not walk the entire length of the interpretive trail, the first sign was chosen as it received the most traffic.

At both sites a researcher recorded the behaviour of tourists to the interpretive signs. Behaviours were categorized into two groups:

1) the visitor *did not stop* at the sign

2) the visitor *stopped and read* the sign in excess of 5 seconds.

The research team determined that a 5 second time frame was adequate to determine if a tourist had read or simply glanced at the sign. For comparative purposes the mean percentages of actual readers will be analyzed through the use of a t-Test, to determine whether or not these interpretive signs differ in their effectiveness at attracting park visitors.

Several assumptions were made during the design of this study. They include:

- signs which are read are more effective than signs which are not read.
- stopping and reading the signs results in some interpretive communication.
- if a person stops and looks at the sign for more than 5 seconds, they are reading the text and gleaning some of its information.

8.1.2 Duration Study

Visitors were monitored at the summit visitor center in DINP to determine the amount of time users spent in the exhibit room. To maintain randomness, every third tourist into the center was recorded until there were four persons simultaneously under surveillance. More than four persons at a time proved too difficult for researchers to monitor. Once a visitor which was being timed exited, the following third person to enter would then be monitored. The visitor's total time spend in the center was determined by recording their entry and exit times as the time of day, to the nearest five second interval. The total time was determined by subtracting the entry time by the exit time. The persons age, nationality, and sex were also recorded. Observations and results were collected on Data sheets (Appendix D).

To establish a baseline time in which all the visitor center exhibits could be read and looked at, three members of the research team were timed as they went through the visitor center thoroughly reading and examining all the exhibits. For comparative purposes the mean times of users groups (nationality and sex) were analyzed through the use of a t-Test, to determine whether or not these interpretive signs differ in their effectiveness at attracting various user groups. The analysis of the age classes was accomplished with a single factor ANOVA. Two assumptions were made prior to the undertaking of this study. They are:

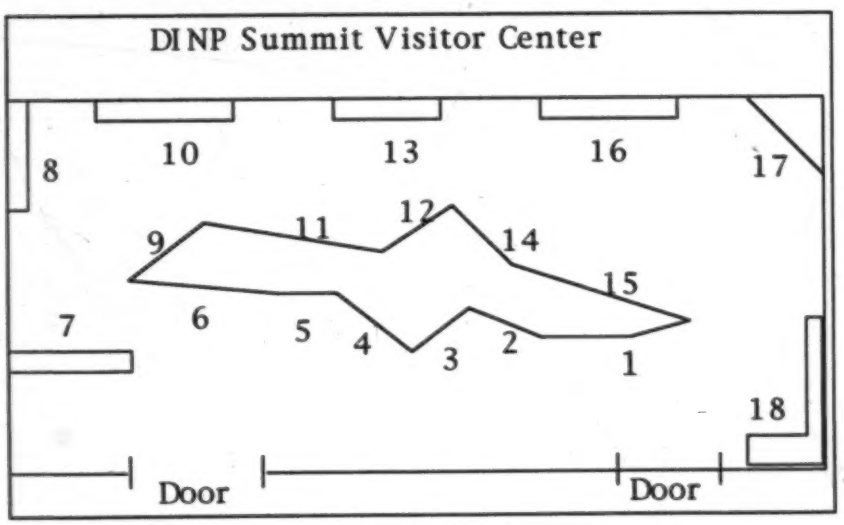
- the more time spent in the exhibit room the more interest the visitor has in the exhibits.
- the more time spent in the exhibit room, the more effective the interpretive displays.

8.1.3 Visitor Center Behaviours

To determine how the existing exhibits are used, and to determine which exhibits are the most effective in gaining the attention of visitors, the behaviour of visitors were

monitored within the summit visitor center. One tourist at a time, selected randomly as the third person to enter the exhibit room, was monitored. A researcher tracked a visitor and recorded at 15 second intervals, which of the exhibits the tourist was currently consulting. Each of the 18 exhibits in the DINP summit visitor center was numbered for this study (Figure 8.1). A 19th category was also incorporated to account for activities within the center, which did not involve the use of the exhibits (i.e.: talking with friends, taking pictures of one another, etc.). The total time in the visitor center was also recorded, as well as the individuals sex, age, and nationality. When it was determined late in the experiment that certain socio-demographic groups were being under-represented by this randomized technique, the researchers actively chose visitors, which would fall into categories that were not being represented.

Figure 8.1: Layout of the exhibits in the DINP visitor Center.



Each of the 18 exhibits were categorized according to style and design (i.e.: text, graphic, etc.). The proximity of the exhibits to the entrance and exits were analyzed to determine if this factor related to use. Several assumptions were made including:

- if a person spends time at an exhibit, they are reading and learning from it.

- the more intervals (hence time) an individual spend at an exhibit, the more interesting the exhibit is to the individual.
- exhibits which attract visitors for longer periods of time are of more interest.
- the amount of time and interest that visitors give to exhibits suggests their effectiveness.

8.2 Results

8.2.1 Effectiveness of interpretation signage

Along the Angka bog trail, in Doi Inthanon NP, several signs occur along the boardwalk, forming an interpretive trail. Most of the signs which feature text are low quality laminated brochures stapled to the handrail alongside a large title sign. The title sign is engraved in wood, and features a title in both English and Thai. The text on the brochure/sign was in Thai only. The trail was initially designed to have brochures which corresponded to the stops, however during the study period no brochures were available. A small map (approx. 30 cm. X 30 cm.) was positioned at the junction where the trail forks in two. The map was unfortunately positioned in an orientation so that it was not seen by users who followed the trail in its intended direction. Most trail users noticed the map of the trail only after completing most of the trail at the end of the loop, when the fork in the trail is once again encountered.

Of 401 visitors that passed a typical interpretive sign ('Climate' stop #7), along the Angka bog trail, 78.05% did not stop to look or read the sign. 21.95% of the visitors stopped for more than 5 seconds and read the information (Table 8.1).

At Ob Luang NP, a comparative study was conducted along the park's most heavily used trail (Plate 2-b). Of the 142 visitors which passed the sign during the survey, 63.38% passed without stopping and reading, and 36.62% of the visitors read some or all of the sign (Table 8.1). When the mean percentage of readers was compared between the

two signs, it was determined that a significantly greater percentage (p=0.00147) of visitors read the sign at OLNP in comparison to the interpretive sign along the Angka bog trail in DINP.

Table 8.1: Visitor reaction to Interpretive Signs in National Parks in Northern Thailand.

	Angka Interpretive Trail DINP (n=401)	Ob Luang "Gorge " Sign OLNP (n=142)
Don't Stop	313 (78.05%)	90 (63.38%)
Stop & Read	88 (21.95%)	52 (36.62%) p=0.00147

The size of the group which approached the sign seemed to also effect whether or not they stopped and read the exhibit. Larger groups appeared to be less likely to stop and read the sign, whereas individuals or couples seemed to stop at the signs with greater frequency. There was no significant differences in which ways age, nationality, and gender effected the patterns of use at these interpretive signs.

8.2.2: Duration of stay by users of the summit visitor center

As the visitor center at the summit of DINP concentrates park users to a greater extent than anywhere else in the national park, the interpretive effectiveness of this facility is of considerable interest. Three members of the research team viewed all the exhibits. Each researcher took in excess of 20 minutes (20 min., 22 min., and 25 min.) with the mean visitation time of the research team being 22 mins. and 20 secs.

Of the 247 visitor center users measured, mean length of stay was 242 secs (4 min. 2 secs) and the median stay was 3 min.(180 secs). This time represents 18.06% of the mean time determined by researchers to read all the exhibits. The range of visitation time was 5 secs-1310 secs (21 mins 50 secs). Two percent of visitors spent more than 14 minutes with the exhibits, while 38.7% of visitors left the visitor center less than 2 minutes after entering the facility (Figure 8.2).

Figure 8.2: Duration of Stay at the DINP summit Visitor Center (n=247).

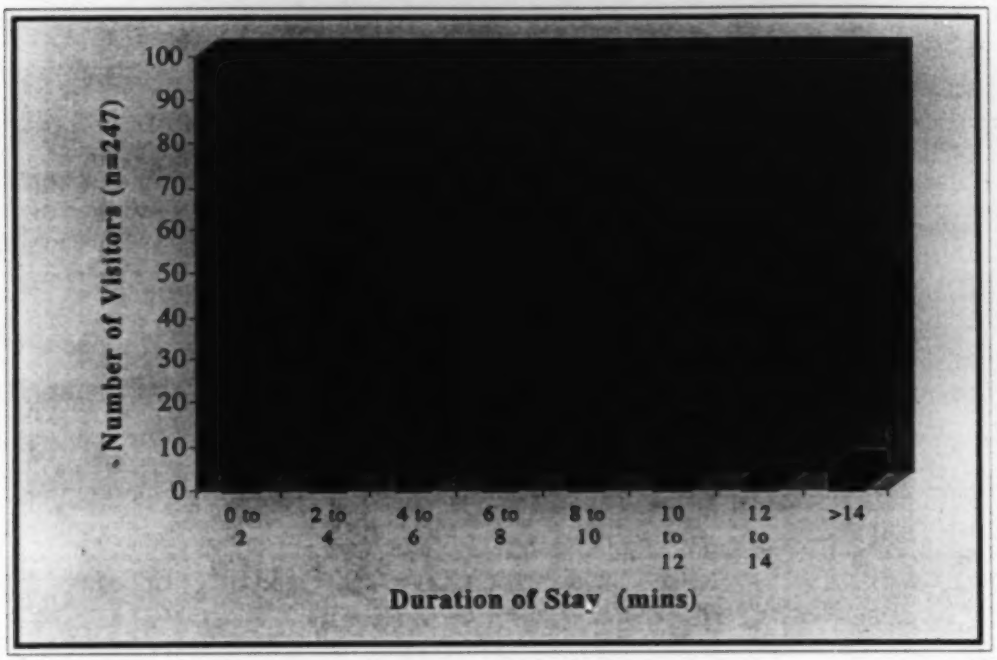


Figure 8.3: Duration of Visits by Thai and foreign visitors in the summit Visitor Center in DINP (n=247).

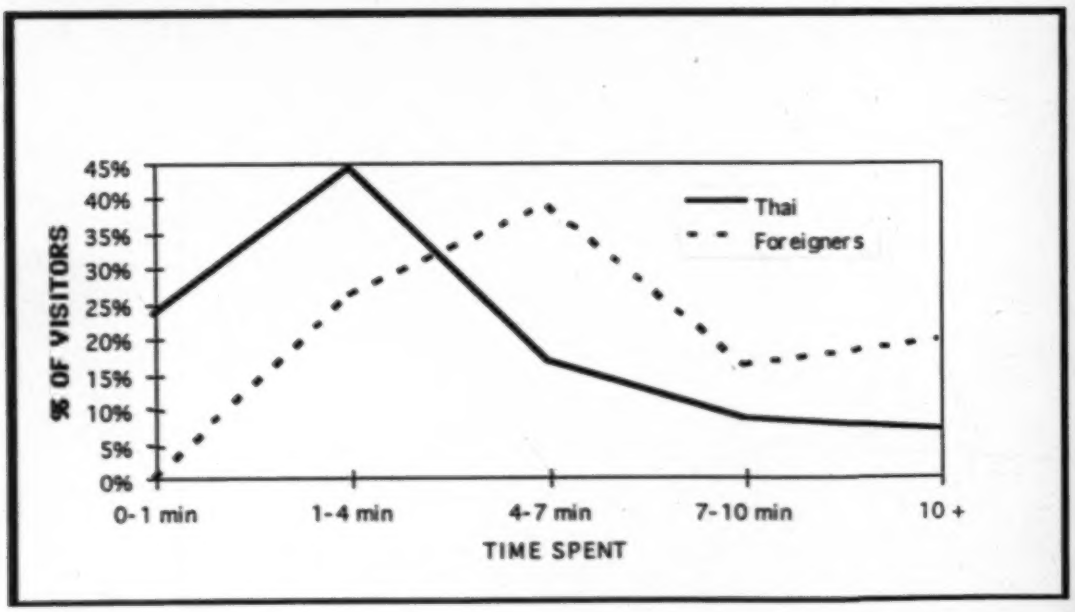
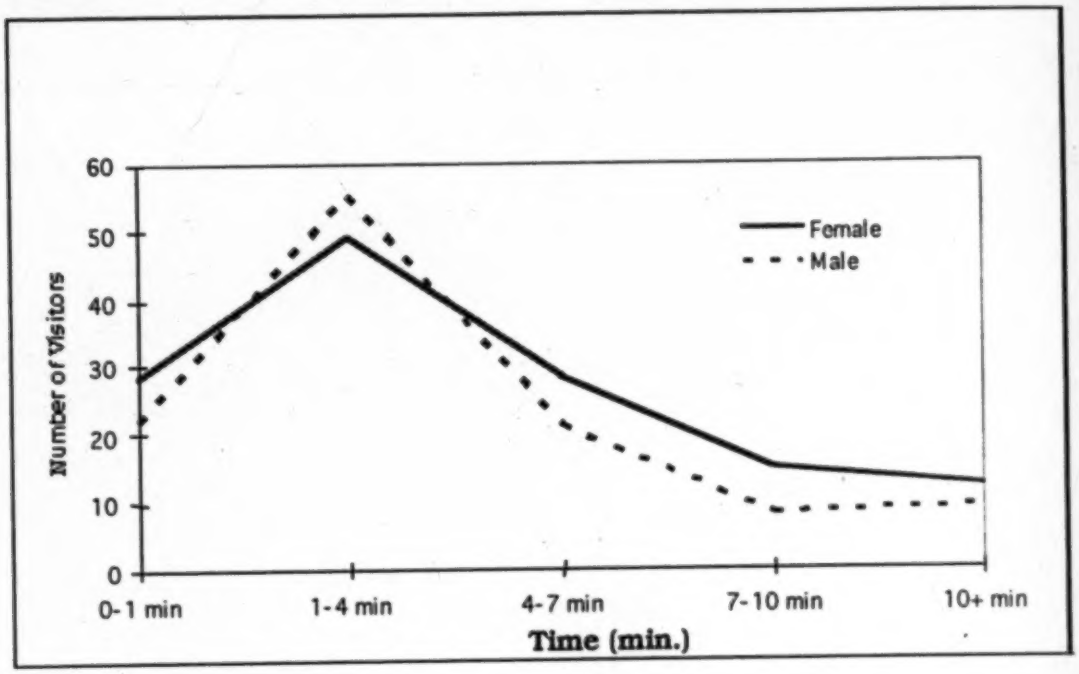


Figure 8.4: Time that males and females spent at the DINP summit visitor center (n=247).



Age class means were evaluated. There was no significant difference between the mean stay duration of the four age classes (0-20, 21-40, 41-60, 60+), although on average the oldest age classes (61+) spent more time than the youngest age class (0-20) (Table 8.2).

Table 8.2: Single Factor ANOVA summarizing the Age Class data of persons duration of stay in the DINP Summit Visitor Center.

Groups	*Count*	*Sum*	*Average*	*Variance*
0-20	19	3605	189.737	28520.760
21-40	150	37525	250.167	57232.690
41-60	54	12495	231.389	35257.940
61+	22	5820	264.545	76559.307

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	79066.13	3	26355.3778	0.5074	0.6775	2.6421
Within Groups	12517461	241	51939.6714			
Total	12596527	244				

8.2.3 Exhibit usage at the DINP summit visitor center

Users of the summit visitor center in DINP, show preferences to certain exhibits. There were 18 exhibits which differed from one another in style, content, and location in the visitor center.

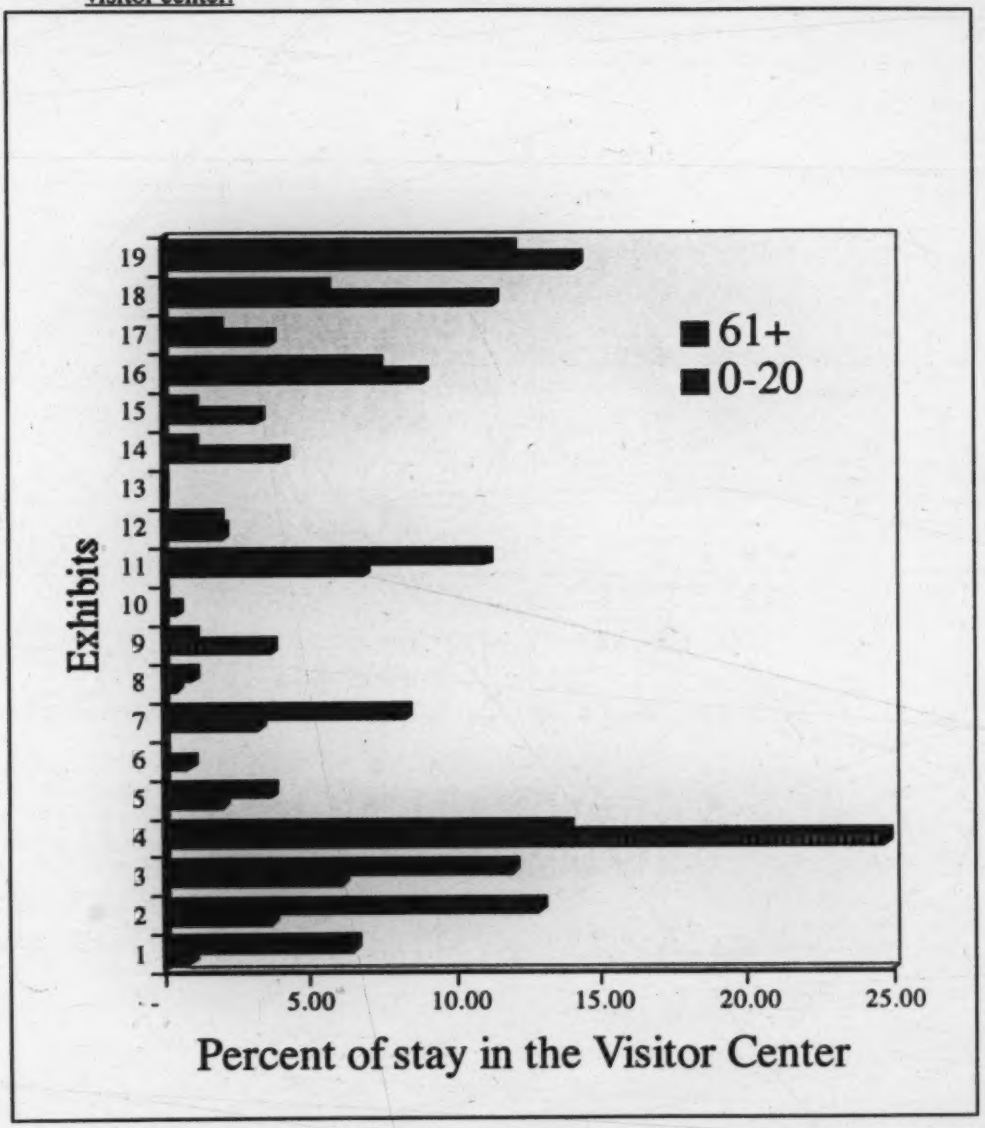
The behavioural patterns of 119 users of the visitor center was monitored. Mean duration of those being surveyed was 205.81 seconds. This is lower but not significantly lower than the mean determined through direct timing 242 secs. (n.sign. p=0.121) (section 8.2.2). Not all exhibits in the DINP summit visitor center were used equally (Figure 8.5). The exhibit which received the most attention from users of the summit visitor center was exhibit number 4. This untitled exhibit was an interactive display which asked and answered questions by a series of doors (plate 3-b). The 19th category (not viewing an exhibit) was the next most frequently recorded. Typically a visitor would be taking to a friend, posing for a picture, or walking aimlessly around the center. The third most frequently visited exhibit was #3, the "History of DINP". This exhibit was located near the entrance of the visitor center and featured text and a number of photographs. The fourth

most popular exhibit according to use, was exhibit #18 entitled "Forest or Shrubland" an exhibit featuring photos, limited text, and glass cases with actual objects, gathered together around the theme of interconnectedness. The least visited exhibit was #13 an untitled panel which acknowledged the efforts of individuals who contributed to the design and building of the center. Table 8.3 lists the usage of exhibits in this study.

Table 8.3: Percent use of exhibits at the DINP summit visitor center.

Exhibit	Raw Total (no. of 15 sec. intervals)	Percent use (%)
1	75	4.63
2	121	7.47
3	160	9.88
4	259	15.99
5	77	4.75
6	19	1.17
7	47	2.90
8	35	2.16
9	33	2.04
10	25	1.54
11	82	5.06
12	45	2.78
13	16	0.99
14	50	3.09
15	66	4.07
16	113	6.98
17	88	5.43
18	136	8.40
19	173	10.67
No. of intervals	1620	
No. of Individuals	119	

Figure 8.5: Comparative Assessment of age class use patterns at the DINP summit visitor center.

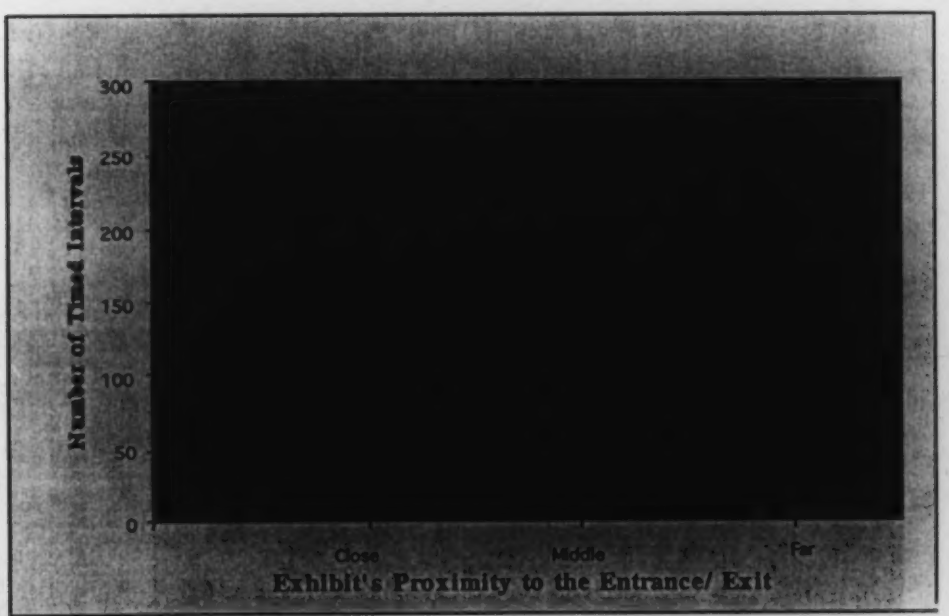


There was no significance between the way in which different nationalities, and genders used the exhibits. However, there was differences in the ways in which the age classes used the exhibits. By looking and contrasting the oldest and youngest age classes (Figure 8.5) persons older than 60 had a different use pattern than those under 20. While every other age class spent a greater time on exhibit number 4, the 60+ age class did not do

so. This age class spent almost as much time during their stay at exhibit number 4 as they did at Exhibit 2, 3, and 11. Exhibits 2 and 3 were primarily text based exhibits complimented with photographs, and 11 is an illustrative exhibit with 29 photographs and illustrations celebrating the biodiversity of the area. Young persons using the visitor center spent almost a quarter of their total time at exhibit 4. They also spent more than 10% of their time at exhibit 18 and 16, which features real life objects, and opportunities for interaction.

The layout of the visitor center also seemed to have an impact on the way it is used by the public. By dividing the visitor center into thirds, an analysis was done to determine the impact of door proximity to exhibit usage. Those exhibits closest to the entrance receive the highest use, while exhibits further way from the door received less use (Figure 8.6).

Figure 8.6: The Effect of Door proximity to Exhibit usage by park visitors.



Visitors to the summit visitor center tended to concentrate their activities in

proximity to the entrance and exit. The exhibits at the DINP summit visitor center were arranged in order, to be proceeded in a clock-wise fashion. As visitor center users were not aware of the order in which the exhibits were being presented, visitors commonly proceeded through the exhibits in a counter-clockwise or random fashion. This confusion compounded the problem of congestion in the summit visitor center in periods of high visitation, and this may have discourage potential use of the visitor center.

8.3 Summary

There was significant differences between the use of an interpretive sign in DINP and OLNP. The more effective sign investigated at OLNP was more professional looking than the low quality sign along the Angka bog trail. The Ob Luang sign was well positioned, well written, features both English and Thai text, and was complemented by a photograph. When we asked a park ranger at OLNP what percentage of the users of the park read the interpretive sign in question he estimated 10%. This is far less than the near 40% that was determined in this study. High quality interpretive sign therefore appears to be accepted and used communication strategy by visitors to protected areas in northern Thailand.

The exhibits within the visitor center were not used equally by tourists. Several exhibits were used less than 2% of the total use time by visitors, while other exhibits received 15% of the use. The most frequently used exhibit was an interactive based exhibit (Plate 3-b). This style proved to be the most popular among all of the socio-demographic group except for seniors. Visitors 61 years and older were common users of this exhibit, however they spent an equal percentage of their time, at an exhibit on the history of the area. Seniors may be more interested in historical exhibits, since it is a subject in which they are perhaps more familiar with than other age classes. In several instances seniors were recorded and observed as they read the entire text of exhibits. This behaviour was

not typical of age classes below 60 years as few non-seniors were observed reading exhibit text so thoroughly. Although seniors may not have used a large number of the eighteen exhibits (they showed a tendency to remain near the entrance) those exhibits which they used, were often read more thoroughly than other age classes. The youngest age class tended to prefer interactive exhibits, and exhibits which featured genuine objects such as insects, leaves, and tools. Unfortunately one of the interactive exhibits required some staff attention to reset the exhibit. This large piece puzzle (exhibit #16) was very popular among young children, however if no staff member is present to 'break apart' the puzzle, users are much less likely to interact with this exhibit. When researchers would "break apart" the puzzle, invariably a user would soon be observed putting it back together. No staff were observed doing this during our survey period.

Our research support the work of others who have investigated the usefulness of interpretive exhibits (Neal 1976, Schleyer 1987, and Shiner and Shafer 1985). Users of the visitor center spent only a fraction of the time (18.06%) that would be required to completely read all the exhibits in the visitor center. In addition, our studies showed that up to 15% of the time that most users spent in the visitor center is spent in pursuits which do not involve exhibits.

This research has determined that the placement of exhibits in the visitor center in comparison to their proximity to the entrance and exits influences their use by tourists. Users tend to find more time for the first few exhibits they encounter as they entered and gradually spend less time at the exhibits towards the rear of the visitor center. Greater impact for important exhibits lie in the placement of these in the highest traffic areas of visitor centers. This means placing these at or near the entrance.

Chapter 9

Effectiveness of the Interpretive Message

A further component of the DINP case study was devised to determine how effectively the interpretive message is being understood by users of the summit visitor center. Medlin and Ham (1992) list as a central premise in the evaluation of interpretive activities "Are visitors *learning* from interpretive services?" This element of the DINP case study is intended to answer in part this question by evaluating the effectiveness in which the interpretive message is being communicated to visitor center users.

9.1 Methods

Researchers standing outside of the summit visitor center exhibit room, asked a standard series of 10 questions to willing participants leaving the exhibit area (Plate 5-b&c). The questions were carefully selected so they represented a range of information (ecology, history, appropriate behaviours, conservation, species identification) and a range of exhibit styles (interactive displays, text panels, labeled photographs, graphics)(Figure 9.1). In response to a concern about the usage of visitor centers by Thai persons (section 6.3.2), participants were asked "Who is supposed to use the visitor center?"

Questions were pre-tested on 20 visitors, and proceeded without modifications. Researchers were careful to clarify to those questioned that the evaluation was of the exhibits and their effectiveness, and not of the visitor's own personal knowledge. Visitors chose whether to participate or not.

The responses of visitors were either graded as correct or incorrect. All of the answers were present in the summit visitor center exhibits. The person's nationality, sex, age category, and estimated period of stay were recorded on a on a standardized data sheet (Appendix E). To ensure randomness when busy, every third person leaving the visitor

center was approached. When the visitor center was not busy, every person leaving the complex was approached. Additionally, researchers targeted certain socio-demographic categories such as foreigners and the 61+ age class, as these represent a small portion of the visitation, and in a random sampling technique would have had minimal representation.

Figure 9.1: Questions posed to DINP summit visitor center users.

Exhibit-based Questions
1. Who is supposed to use the Visitor Center?
2. What famous feature was the main reason for the establishment of DINP?
3. What is the ugliest thing in DINP? (interactive)
4. What are the names of the two Hill Tribes in DINP? (written)
5. About what percent of wildlife remain in DINP from 400 years ago? (graphic)
6. What is the most dangerous animals in DINP? (interactive)
7. How did the park get its name? (written)
8. Why are there so many birds that spend the winter in DINP? (written)
9. What is the name of this bird? (photo)
10. What is the name of this plant? (photo)

9.2 Results

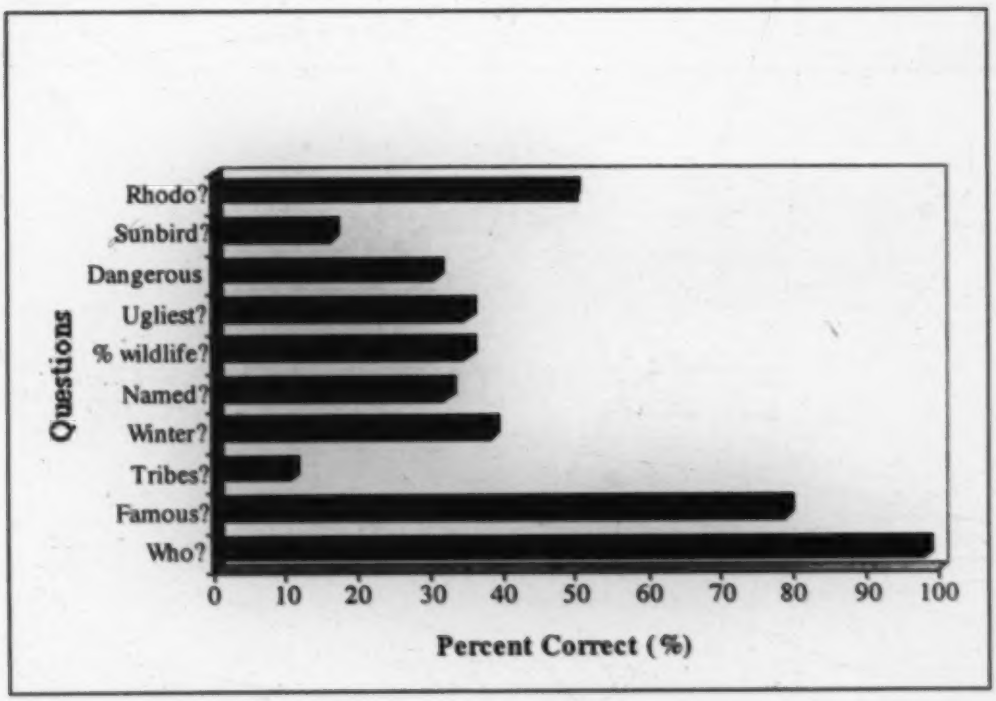
9.2.1 Effectiveness of exhibits

Almost all of the 141 visitors who were surveyed exiting the visitor center (97.87%) knew that the center and exhibits were intended for all visitors to the park. Most of the people surveyed (78.72%) also knew that the primary reason for the designation of DINP as a national park was that it was the highest mountain in Thailand.

The remaining eight exhibit-based questions were not answered correctly by a majority persons surveyed. Almost half (49.65%) of those surveyed were capable of correctly identifying a photograph of a red rhododendron (1000 year rose), while 16.31% were capable of correctly identifying a photograph of a green-tailed sunbird (Plate 4-a). There were 4 labeled photographs of the green-tailed sunbird in the visitor center, and the

birds themselves would often be flying around outside the visitor center. Conversely, there were 2 labeled photographs of the red rhododendron among the exhibits. Flowering rhododendrons were in bloom, on infrequently visited trails in the park.

Figure 9.2: Effectiveness of the Exhibits for Visitors to the Summit Visitor Center at DINP.



Two interactive displays were evaluated. The exhibit which contained this information was the most heavily used exhibit among park visitor (section 8.2.3) and involved visitors reading a question on a closed door, and opening it to resolve it (Plate 3-B). The question "What is the Ugliest thing in DINP?" (Answer: garbage) was correctly answered by 34.75% of visitor center users. The other interactive question "What is the most dangerous animal in DINP?" (Answer: Humans) was correctly answered by 30.5%

of visitor center users. Exhibits which relied primarily on text also effectively communicated their information to a minority of visitor center users. When asked "How did the park get its name?", "Why do birds migrate here during the winter?", and "What are the names of the two Hill Tribes in DINP?" 31.91%, 38.3% and 10.64% of visitors respectively were capable of correctly answering these questions. The one exhibit which was primarily graphically based, successfully communicated its message to 34.75% of visitor center users (Figure 9.2).

9.2.2 Effectiveness of exhibit style and design

Among the various exhibit styles (graphic, written, interactive, photos) there was no differences as to their effectiveness of communicating to visitor center users. The percent of correct responses (Figure 9.2) among these exhibit styles were not significantly different (Table 9.1). Questions from exhibits which featured a combination of styles were answered correctly by 38.8% of participants, while Graphic (34.75%), Photographs (32.98%), Interactive (32.62%) displays were very similar in effectiveness. Text or written based exhibits were less effective on average (21.28%) than the other exhibit styles (Table 9.1).

Table 9.1: ANOVA of the effectiveness of exhibit styles in the summit visitor center.

SUMMARY

Groups	*Count*	*Sum*	*Average*	*Variance*
Interactive	282	92	0.3262	0.2206
Photos	282	93	0.3298	0.2218
Written	282	60	0.2128	0.1681
Graphic	141	49	0.3475	0.2284
Combination	141	54	0.3830	0.2380

ANOVA

Source of Variation	*SS*	*df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	3.7979	4	0.9495	4.5020	0.0013	2.3799
Within Groups	236.8404	1123	0.2109			
Total	240.6383	1127				

9.2.3 Effect of time spent with exhibits

The amount of time persons spent in the visitor center was a significant factor in the effectiveness of the exhibits (Table 9.2, Figure 9.3). The average number of correct responses among persons which spent less than 5 minutes in the summit visitor center was 3.717 /10, while those persons spending more than 5 minutes with the exhibits scored 4.806 /10 (Figure 9.4). Without exception, exhibit-based question were answered more correctly by those persons who spent more than 5 minutes in the visitor center, than those who spent less than 5 minutes in the visitor center (Figure 9.4).

Table 9.2: Regression of time vs. correct responses.
ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	56.1747121	56.1747121	20.5967982	1.2157E-05
Residual	139	379.101884	2.72735168		
Total	140	435.276596			

Figure 9.3: Regression of time to total correct responses (n=141).

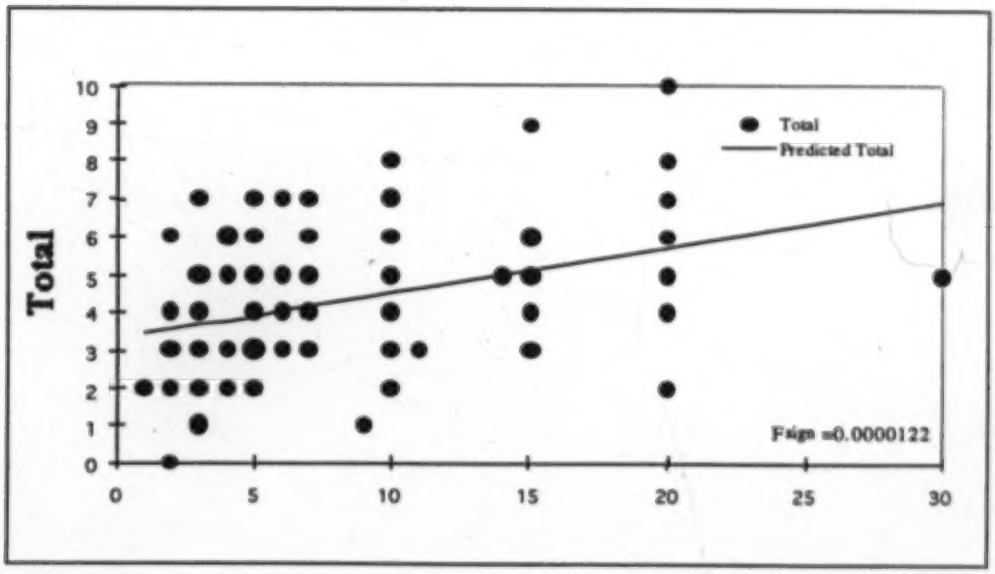
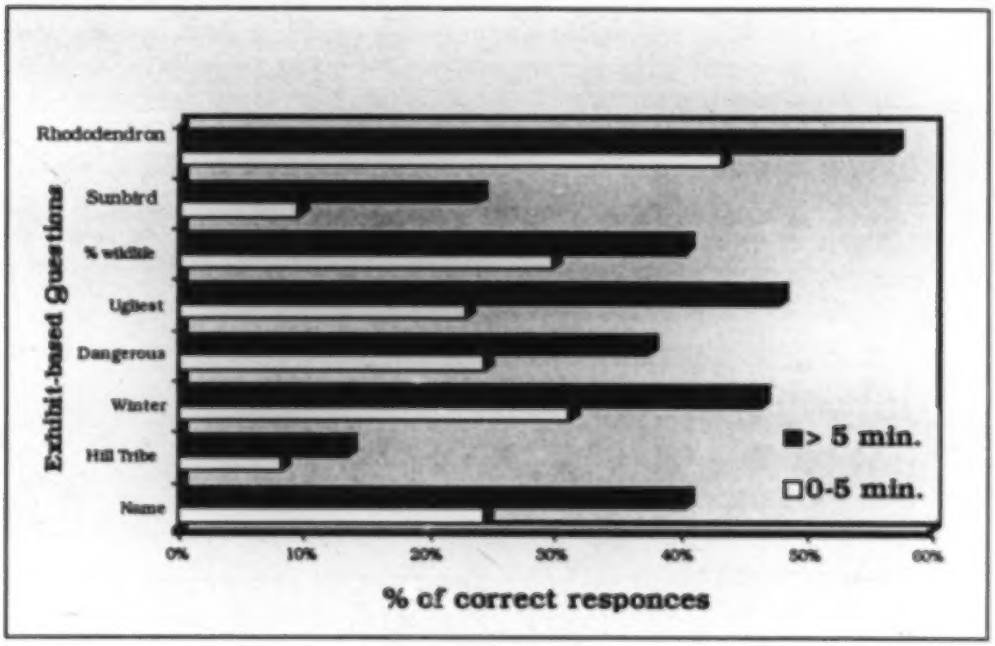


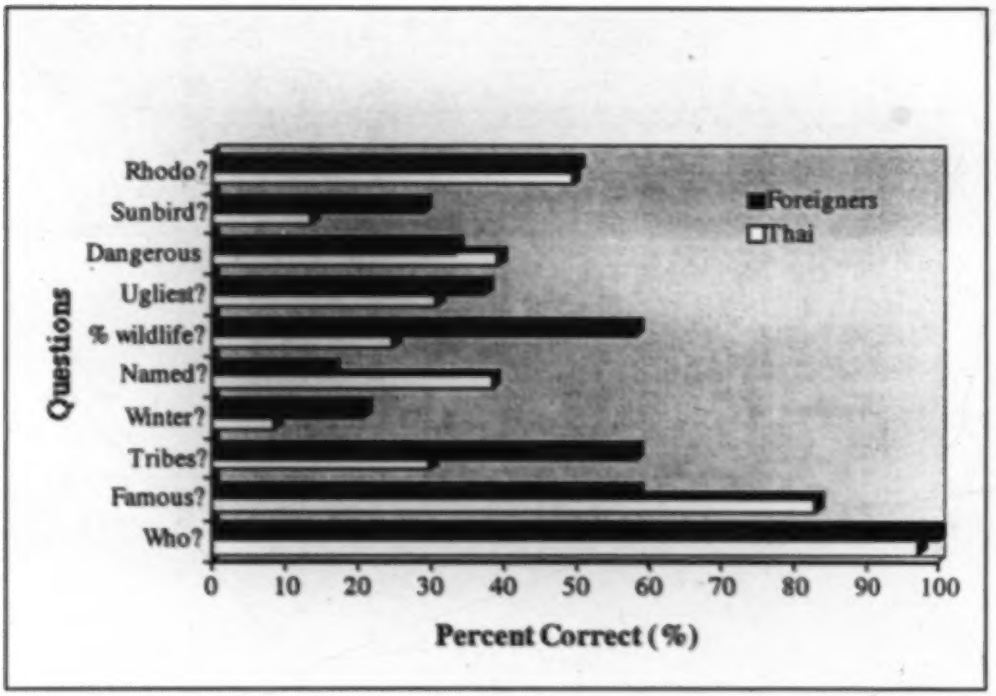
Figure 9.4: Percent of correct responses with visitors who spend less than and more than 5 minutes in the DINP summit visitor center.



9.2.4 Effectiveness among user groups

The average number of correct responses among Thai (41.54%) and foreign persons (46.25%) leaving the visitor center were not significantly different from one another (t-Test p=0.2795). Figure 9.5 illustrates that the overall correct number of response are similar, however there was some interesting trends among some specific exhibit-based questions. Foreigners were more successful in identifying the green-tailed sunbird, knowing what percent of wildlife remains in DINP from 100 years ago, and the names of the two hill tribes in DINP. Conversely Thai visitor center users were more familiar with the most famous feature of the park and how the park received its name.

Figure 9.5: The effectiveness of visitor center exhibits to Thai and Foreign visitors.



There was no significant difference in the average number of correct responses given by the different age classes to the exhibit-based questions (43.33%; 41.19%, 45.60%, 27.50% p=0.2907) The oldest age class (61+ years, 27.50%) faired the poorest among those surveyed, however the sample size was too small to suggest any conclusions.

9.3 Summary

The results obtained in the evaluation of the DINP summit visitor center support the work of researchers elsewhere. The vast majority of viewers questioned by Neal (1976)

could only remember " a few facts and images" from exhibits experienced. Users of the summit visitor center in DINP during normal use patterns acquire little of the information presented in the exhibits.

Most of the people who used the interpretive center knew that the center was intended to serve all people who visit the park. The suggestion that Thai visitors view the visitor center as serving travelers, and not locals was not supported by this work. This study however, did not ask those visitors to protected area who did not use the visitor center 'who this facility is intended to serve?"

The large majority of persons who knew that DINP was primarily created to celebrate the fact that it is the highest point of land in Thailand, may not have learned this through the interpretive displays alone. Most Thai people know of DINP or at the very least the mountain Doi Inthanon. In the school curriculum, all Thai students are taught that Doi Inthanon is the highest point in the country, and therefore visitors to the park, know this point if little else, this point. Thai tourists answered this question correctly 82.91%, while Foreigners 58.33%. As foreigners are not previously exposed to this point to the same extent as Thai people, their answer to this question may be more representative of the effectiveness of the interpretive facilities and information media in and outside of the park. The exhibit in the visitor center which celebrated this point was the first exhibit to be encountered in the visitor center. This proximity to the entrance may also be a contributing factor to the high rate of correct responses.

Only 16.31% of those questioned could identify a photo of a green-tailed sunbird, in spite of there being 4 labeled photos of this species in the visitor center. In contrast 49.65% of those questioned could identify a red rhododendron (1000 year rose). The 2 labeled photographs in the exhibit were of no better quality than those of the sunbird. This difference in correct responses is therefore unlikely attributed to the effectiveness of the interpretive exhibits, but rather it may result from our survey population's greater basic knowledge or interest in plants over birds. The identification of both the sunbird and the

rhododendron are not primarily-based on first-hand experience. The flowers were not seen by most tourists who remain in the heavily visited tourist areas of the park. The sunbird is easily seen at the summit visitor center.

Foreign users of the visitor center were more successful in identifying the sunbird, the names of the two hill tribes, the reasons for the abundance of bird life during the winter, and percentage of wildlife remaining in the park from 100 years ago. As sunbirds are extremely exotic-looking animals (Plate 4-a), a photograph might attract the eye of a traveler from a foreign country more so than a Thai person, who may be accustomed to photographs of tropical avian species. This likely extends as well to the names of the hill tribes, which to a foreign traveler may appear more extraordinary than to a Thai, who is more or less accustomed to minority cultures in Thailand. These exhibits which display themes that Thai people may consider of regular occurrence, may have a broader appeal to foreign travelers who will not be effected by parochial perception. The rhododendron serves as a useful example of this, as it was relatively well known by Thai tourists in spite of the fact that it is to Thailand, essentially an exotic or foreign species. Rhododendron are not tropical species, and occur only in Thailand in the coldest climates, atop their highest mountains. In contrast, sunbird species are common throughout much of Thailand, and therefore the presence of another species, may not be viewed upon with great interest by the Thai public. The species at the summit is endemic to DINP, a fact that is not celebrated as warranted in the existing interpretive facilities.

Foreign visitors were also more aware than Thai people of the reasons for the abundance of bird life during the winter in DINP. Foreign persons, which may be primarily from northern countries may be more familiar with the seasonal migratory movements of birds. Thai people may not be as aware of the conditions of northern habitats which results in the winter movements of birds into DINP.

There was no significant difference in the style of exhibits as to their effectiveness to visitors. The questions posed to visitor center users, based on text-only exhibits

however, were answered less correctly than those based on photographs, interactive, or graphics. The fraction of selection (Trapp et al. 1991), suggests that persons are more likely to participate in an interpretive exhibit if their expectation for reward is high, while the effort required is low. Exhibits which are graphically based require less effort than those which are text-based. Persons using the summit visitor center, however may have a low expectation of reward for the graphic-based exhibits because they may not appear to provide much information. Similarly, text-based exhibits may appear to have information which may lead to a reward, however the effort required to accomplish this may appear too great. Veverka (1994) has suggested that visitors retain up to 90% of information in interactive exhibits, and as little as 30% in exhibits they read. Although this study did not attempt to quantify the effectiveness of exhibits styles in this manner, it was evident to researchers who were posing the questions, that visitor center users reacted quite differently to the various exhibit styles. Quite often, a user would be unable to recall information from a text-based exhibit which they read. It was a different matter for those who had used the interactive displays. Not a single person questioned indicated that they had forgotten the information asked of them pertaining to an interactive display.

The visitors who spent more than 5 minutes in the visitor center, provided more correct responses to the exhibit-based questions. This result leads to the conclusion that exposure to exhibits contribute to the learning process of those surveyed. The more time persons spend with the exhibits, the more information they retain. This learning process which is complimented by previous experiences and interests, has demonstrated successes to a minority of users during this study. By encouraging extended visitations, through improvements in design and content of the exhibits, future users of the summit visitor center may be better informed of the protected area's themes and challenges.

Chapter 10

Examples of interpretive excellence outside of protected areas management

During the course of the study, researchers were exposed to examples of excellence in interpretive services. The examples that are treated in this section are initiatives in protected areas that are being driven by persons (in most cases) other than protected areas managers. These were investigated through discussions with appropriate personnel, and observations were made to record the successful features. Persons involved in the programs were questioned to acquire the background information. Successes of these programs and initiatives are discussed to serves as exemplary achievements in the continual development of various forms of interpretive communication strategies in Thailand.

10.1 Examples of excellence-personal services

10.1.1 Foreign volunteers

> *"The people who are spurring on interpretation are foreign volunteers, because its a western idea and they need western people to do it."*
> Steve Paglia US Peace Corps, JSNP

The lack of financing and expertise in protected areas directed towards interpretation, requires other solutions to the problem of creating and administering this service. The task of implementing interpretive programs often becomes the responsibility of foreign volunteers. Most of the prominent national parks that we visited, had volunteers that recently completed their commitment (between 1992-1996), and in every case they had contributed to the interpretive programs. The volunteers were from the United States, Canada, and Great Britain. Within the parks and protected area that were surveyed, all

visitor centers were designed by foreign volunteers, except for the new visitor center at Ob Luang National Park. Steve Paglia at Jae Sorn National Park, with the United States Peace Corps, was two years into his 27 month long duty, and the only volunteer currently active in the study area. There were other foreign volunteers elsewhere in Thailand.

Paglia felt that there was a reliance on the foreign volunteers to establish the interpretive programs, and was very concerned about the state of the programs once the volunteers leave. After visiting other parks in the district, he became increasingly concerned about the long-term state of interpretation, as he believes that little is done to maintain the level of interpretation after the volunteer returns to their country of origin.

> *"If I can't find a way to make it sustainable, I'm not going to do it, it will just be wasted money. So for everything I do I have to think how can I make it last after I leave. If there isn't a (foreign) volunteer to foster it, it just peters out."*

We were able to find ample evidence to support the concerns of Mr. Paglia. Following the departure of foreign volunteers from Doi Inthanon, Jae Sorn, and Doi Khuntang National Parks, it appeared that little maintenance and initiative were ongoing to promote the interpretive facilities that were established during the tenure of the volunteers. Interpretive signs were damaged, and visitor center exhibits in many cases were worn and suffered from vandalism, in spite of relative short time since the foreign volunteer had departed. As was the case of foreign volunteers before him in Thailand, Paglia was in the process of designing the exhibits for the visitor center, identification signs for trees, and sharing his thoughts on conservation with many of the personnel working in the park.

The interpretive services were well maintained in Ob Luang National Park. Although the visitor center and interpretive signs were less than a year old, ongoing maintenance was being conducted to maintain the standards it held when first opened. The visitor center and interpretive signs at Ob Luang were the only interpretive services designed by a Thai team from the Royal Forestry Department, in Bangkok. Working

concurrently in the park at the time was a team of French archeologists, who contributed to the content of interpretive archeological exhibits in the visitor center and on trail signage. The compilation of the French scientists and the Thai designers produced factual interpretive resources on resilient, and high quality media. Unfortunately the style of the exhibits suffered as a result of not having someone trained in interpretive writing (section 7.3.2)

Evidence suggests that a complete reliance on foreign volunteers in the development of interpretive facilities is an unwise procedure to follow. Protected areas managers seem to have in the past, relied too heavily on foreign volunteers to produce the interpretive facilities in the parks. The efforts at OLNP demonstrate that through an alliance between volunteers and park officials, protected areas develop a pride and ownership of facilities, in which they were involved in designing.

10.1.2 Unrecognized values in park employees

Doi Inthanon National Park had some interesting and self-motivated personnel dedicated to sharing nature with others. One ranger in particular was very interested in natural history and birdwatching in particular. His official duties were much like the rest of the rangers/laborers in the park: maintenance and infrastructure improvements. Boonjoo (Joo) Rukdee however, proved immediately to us that he had talents and abilities to serve the park and the public in an expanded role. This was clearly evident during our first meeting with the park assistant superintendent, Mr. Joo was invited to participate in the meeting. Although at the time the significance of this was not apparent, we never again in our experiences encountered that level of formal consultation between senior officials and the workforce. It was obvious that park officials considered Mr. Joo as an communications asset, although he performed no official nature interpretation duties. During his time-off however, we frequently encountered Mr. Joo at the summit visitor center photographing wildlife or speaking directly to the visitors. He was the only

national park staff in DINP that was seen interpreting the natural assets of the park, although these were done on a volunteer basis.

Mr. Joo explained that he also conducted guided walks on the various trails. On certain trails, park policy dictated that visitors must be accompanied by a ranger for safety reasons. On these guided walks, both Mr. Joo and other visitors which he had led, indicated that he performed interpretive duties, even though these are not part of the expected role of the guide. Visitors who had been guided by other DINP staff indicated that there was little communication between them and the guides, and little knowledge of the park was gained during the hike. Mr. Joo was also actively involved in the formation of the 'Nature Interpretation Society' (section 10.2.2), based out of one of the small Karen hill tribe villages in the park. The enthusiasm and level of knowledge Mr. Joo has attained are considerable, and his asset to the interpretive process of Doi Inthanon National Park was not being realized.

10.2 Examples of excellence- private initiatives

10.2.1 Birding Visitor Center in DINP

Mr. Deang is a private concessionaire in DINP, operating a restaurant very near to the park's headquarters. He has been operating in the park since 1980, and in that time has become familiar with the birds and the birding features of the park. Part of Mr. Deang's shop includes a birding visitor center, with photographs, checklists and diaries of sightings in the park. He has also produced a free map detailing specific areas of the park where one might expect to find sought after birds. His simple promotions are oriented towards birdwatchers. The only sign on the roadway to his facility is for a 'Birding Visitor Center', and not a restaurant. Mr. Deang is widely known in the birdwatching circles throughout Thailand, as an expert on the birds of DINP, and openly and freely shares his knowledge with interested visitors.

Mr. Deang frequently drives birdwatchers to areas of the park where specific birds are likely to be encountered. He generally does not charge for this service. Although having but a limited knowledge of English, he knows all the bird's English names, and communicates effectively the locations and possibilities of viewing sought after species to English speaking birdwatchers. To Thai visitors, Mr. Deang is greatly respected and admired for his efforts to "save the birds" of DINP. His communication strategies motivated in part by his love of birds, and also in cooperation with his restaurant, has resulted in a growing awareness among birdwatchers and visitors to DINP of the ecologically significant makeup of this park's avifauna, and of the park's conservation status. Mr. Deang, although not associated officially with national park management, is Doi Inthanon's most effective communicator of natural features. He has realized the public's demand for a service, and has honoured the natural features of Doi Inthanon through his considerable efforts.

10.2.2 Nature Interpretation Society

A small group of people based out of a Karen village in DINP independent from national park management, has been training local persons into establishing an interpretation organization which will guide visitors through the park. The 'Nature Interpretation Society of Doi Inthanon National Park' strives to share local insight, mixed with outside knowledge. The training program for the locals have been ongoing since 1994, and it benefits from the support of the local community. The entire village is involved in some capacity, as their business platform involves on-site lodging, guiding, manufacturing and sale of merchandise. Much of their philosophy have been based upon the principles of the National Park Service in the United States. The logo of the Nature Interpretation Society is a green-tailed sunbird with the words 'Understanding, Appreciation, Conservation.'

The founding members of the society train the locals to understand English and Thai (the Karen do not speak Thai), and instill within them the confidence and techniques

useful in guiding visitors. During the period of our study, guides-in-training were gaining experience with the visitors in the park, conducting impromptu interpretive events at the summit and elsewhere in DINP. As there was no official programming by national park staff, no conflicts arose with park management at these events. The 'Nature Interpretation Society' were producing brochures, maps and other materials for sale and distribution to visitors on their tours.

This small group of determined and committed individuals have overcome many financial and cultural barriers in establishing this society, and had begun taking tourists during December 1996. What the group lacks in funding, it makes up for in creativity and energy, marketing, and involving local community members in the production of merchandise. All proceeds are directed back into the local community. The Nature Interpretation Society at DINP plans to conduct guided interpretive services, and publish materials for groups tours and individual visitors to the park.

Mr. Chodok , the superintendent of DINP had indicated that Hill Tribes living within the park are its biggest management challenge. The Nature Interpretation Society of DINP has in part, contributed to the solution of this problem, by promoting an intrinsically-based, non-extractive business venture in a Hill Tribe village.

10.3 Partnerships with protected area management

10.3.1 Khao Sok Rainforest Resort Education Center

Although Khao Sok National Park lies outside the study area of this project, it's creative interpretive services are models of excellence for Thailand and other developing countries. The park itself has many of the typical interpretive services, including brochures and a visitor center designed by a foreign volunteer. It is the work being conducted by the Rainforest Resort Education Center however, that provides visitors to this famed park, quality interpretive and unique educational experiences. The Khao Sok Rainforest Resort

Education Center is made up of several area resorts which lie outside of the park's main entrance. The first resort established was the Khao Sok Rainforest Resort co-founded by Thom Henley- a prominent Canadian environmentalist, and Anothai Chanyoo a local businessman. Soon after opening, this resort began leading ecotours into the park, focusing on the regions' exceptional biodiversity. As the park's biodiversity is not well understood by the scientific community, they turned to a former poacher-Nit, to introduce visitors to the dynamic rainforest ecosystem. Nit's unsurpassed knowledge of this region demonstrates an ability of local people to qualify as expert guides. As a master tracker, Nit shares his intimate knowledge of the animal, plants, and ethnobotany as no one trained outside of the forest can. The fact that a former poacher now works to promote ecotourism and nature education, also encourages other local residents to realize other potential intrinsic economic uses of the forest. Since the Rainforest Resort has been operating, several other 'resorts' have established themselves along the parks border. Most of the other accommodations also provide services, from guided walks to rafting on the rivers. These activities give park visitors a variety in activities and guiding skill levels to choose between. Because of the variety of tours in and around Khao Sok that are available, all socio-economic levels have the opportunity to participate at some level. At many of the other resorts in Thailand, foreign travelers are catered to exclusively. In the Rainforest Resort Education Center there are activities available to all travelers, with associated interpretive guides. The type of tours available include, all-day jungle treks, boat tours, night-spotting, river trips, and cave exploration walks.

Although Nit, the expert tracker for the Rainforest Resort had no formal training in interpretive duties, his natural talents and acquired experiences demonstrated an ability to manage guided walks. The following are some points that Nit used to manage his excellent service (Figure 10.1). Nit ably demonstrates the ability of local persons with little formal education to serve as respected and capable nature guides, who can earn more money in this field than in their previous occupations.

Box 10.1: Interpretive Guiding Principles Used by 'Nit' in Khao Sok national park.

- his walks were well-paced, always keeping the slowest member of the group within close distance
- he always led the group, clearing away hazardous items from the path (only once did he send someone ahead to view a bird which otherwise might flush if a large group was present)
- excellent group cohesion, everyone felt as a part of the unit, everyone was spoken to
- his knowledge of the rainforest was unquestionable, and in the instances in which he was unsure, he freely admitted to it
- the routes were well planned, with frequent stops allowing for members of the group to catch their breath
- when stopped there was always something to share about the features in the area (often ethnobotonical)
- he catered his delivery to individual tastes; if someone was interested in insects he deliberately pointed out more of these features than he would otherwise
- he added a local flavour, sharing local stories, presenting the food in a traditional way, and giving foreign visitors a sense of how Thai people view and use the environment they were visiting
- when he smoked he did so on stops, and not while walking on the trail so not to alert animals
- he carried all the groups' water and the food, leaving visitors to handle their camera equipment and personal gear
- at no point did anyone get the impression that the guides were 'talking about them behind their backs', as was the case with other guides

The Khao Sok Nature Education Center has also produced a book *Waterfalls and Gibbon Calls*. Written by Thom Henley, this affordable publication describes the natural features in the park, and features a guide to a numbered interpretive trail developed in conjunction with the national park. Proceeds from the sale of this publication are directed to the continuation of nature education and interpretation at Khao Sok National Park.

The Khao Sok Nature Education Center has also been influential in dealing with scientific researchers. Since it first began, the center has been inviting scientists from around the world to investigate the biodiversity of the region. Much of the research is supported by local knowledge, and the area has been in the forefront of research on everything from felines to the rafflesia flower. Scientists generally stay on site and

contribute to the visitor's experience through their work, and through social interactions either in the field or at the resort.

10.3.2 Private corporations

One way in which the fiscal problems of park management were being overcome was through alliances with private companies. Doi Inthanon was the only park that we observed experimenting with this fund-raising idea, but most other parks in the north tend to follow Inthanon's lead, and it is reasonable that others may follow should the venture be successful. The maps that are available to the visitors to Inthanon have a PEPSI logo in the top corner, and a large map sign panel at the summit is sponsored by a cellular phone company.

During the course of this study, the state electrical company had sponsored the renovation of the Goo Mae Pan nature trail, and the construction of a new boardroom for the park headquarters. This project was ongoing during our stay in the park and was met with some skepticism by some observers. Some persons were of the opinion that the electric company was trying to gain some positive public support in the light of a proposed hydroelectric project elsewhere in Thailand, whose reservoir would threatened the last remaining wild teak forests in southeast Asia. Additionally, there were rumors that the electric company would be building a new transmission corridor to feed the rapidly growing market in northwest Thailand. It was indicated that this corridor could pass through DINP. Although researchers had heard these stories, nothing substantive was related directly to the research team. The public relations official who was met in DINP suggested that the electric company's motivation was to assist DINP as a service to Thailand's protected areas and as a project which would benefit the public profile of the corporation.

10.4 Tham Lod cave

10.4.1 Tham Lod Environmental Education, Recreation Development and Extension Center

Tham Lod is an exceptional natural feature of high ecotourism potential in northern Thailand. A small protected area has been established to promote the geologic, biologic, and cultural values found at this world class destination which, featuring a river passing through a large cave. A visitor center was being designed on site, and several interpretive signs were in place along the trails, that most tourists follow to and through the cave system. Mr. Krit the director of the education center, is very interested in promoting the educational values of his park system, and is actively undertaking initiatives to improve the nature center and interpretive opportunities. He solicited our suggestion for improvements and many of our comments were put into action. Mr. Krit had recently completed the MAFA program at Maejo University, writing a thesis on the attitudes of local participation to guiding efforts within the protected area. Through the MAFA program he has had the opportunity to visit protected areas in the United States, and the influence of this visit is reflected in the interpretive services which he provides. The interpretive signs which he designed, clearly showed the influence of similar signs which he observed through his tour of protected areas in the United States in 1996.

Most of the tourists who visit Tham Lod, hire a local guide (100 Balt=$5 CAN) to take them through the cave system. This program is operated primarily by a local organization, with input from Mr. Krit, as the director of the protected area. The guides follow a prescribed route and stop at designated locations to interpret features in the cave system. There is a range of expertise among the guides in the amount of knowledge about the cave. Our guide was fairly effective at sharing the prescribed information, but struggled when additional questions were posed. They spoke lttle English, and would benefit from additional training. A private tour operator from Chiang Mai commented on the situation, indicating that Tham Lod may be destined to have poorly trained guides. He

suggested that if the guides were to improve their skills, many would leave the low paying job at guiding at the cave in favour of leading foreigners for much higher wages.

Tham Lod is an excellent example of local initiative, deriving benefit through ecotourism and nature interpretation. All of the guides come from the adjacent villages. There are 75 guides who are employed at Tham Lod, and because of this high number, individuals do not have the opportunity to conduct many tours per day. Because of this great supply of guides most make very little money. This may have been purposefully designed, as the revenue from this venture was suggested to be spread as widely through the community.

10.4.2 Characterization interpretation

One experience which provided insight as to the effectiveness of characterization interpretation was an incident at Tham Lod ERDC center. Characterization interpretation is an often used process where the interpreter dresses in period-costume and acts out an appropriate role. This form of interpretation is used effectively in cultural and natural history settings in Western protected areas, but may not be effective the Thai culture.

There already exists signs, guides and a visitor center at Tham Lod, and it would be an excellent candidate site to identify potential strategies which may improve the quality of the visitor's experience. Tourists that arrive at Tham Lod are currently guided through the cave network by a local guide. The cave can be divided into three separate themes, geomorphology, cultural, and biological, according to prominent features within clearly defined areas of the cave. Following the geomorphologic component, visitors have the option of riding down the river to another cavern. At this cavern, several prehistoric coffins, and other archeological materials are shown to the visitors. These materials are thought to be thousands of years old and represent one of the finest examples of prehistoric human settlement in northern Thailand.

A suggestion by researchers was made that a guide meet tourists at this second point, in appropriate period costume. Perhaps this prehistoric character would relate to

visitors that they were at the cave in respect to those buried within, and the character could explain the significance of this cave from a their own viewpoint. The cultural as well as the natural features of significance could be highlighted in an informative, entertaining, and memorable manner through this technique. Such interpretive characterizations bring the history and values of such places to life, where they occur.

This suggestion was dismissed outright by all Thai people to whom it was suggested, because it conflicted with cultural beliefs. Thai people are very respectful of the dead, and it was indicated that Thai visitors would find the portrayal of a historic figure inappropriate. Additionally, they stated that it would be very difficult to find a Thai person to play the role of a historic figure because of the strongly held beliefs of death held by Thai people. This realization reinforced the notion that the interpretive programming, to be most effective must balance proven techniques with cultural influences.

10.4.3 Cave Lodge

John Spies, who operates the 'Cave Lodge' in a village bordering Than Lod ERDC, was the one who 'discovered' and first promoted the tremendous natural features of this region. Realizing the potential of this area as a tourist attraction he established his lodge and began taking his clients on tours of the Tham Lod cave system. Spies wrote and illustrated many articles in popular magazines featuring the speological adventures of the cave system. As a result of the increased tourism activity in the area, the ERDC protected area was established, and the local village began to take a proprietary role of this natural attraction. Now that the local village takes visitors to the cave, Spies takes guests from his accommodation to the other caves in the area. At his "Cave Lodge" communal room, labeled photographs, a bird checklist, materials on local Hill Tribes and the caves in the area are within easy view of visitors. Videos of past caving adventures with clients are viewed prior to leaving on their own adventure, and in the videos it is clear that many of the caves features are interpreted to the clients by well educated and clear speaking tour leaders.

John Spies has supplied to the local guides, and Mr. Krit much of the geological information of Tham Lod that they now share with visitors. His recommendations to improve the interpretive process in the main cave of Tam Lod stressed the need for improved training, and the preservation of the caves features through increased public awareness, and visitor management.

10.5 Summary

Foreign volunteers in protected areas were among the first persons to establish interpretive services, and certain managers appear to have developed a reliance on the expertise of these volunteers for the continuation of the programs. Certain parks which have used Thai designers in the development of their services have notably better maintained structures, and staff tend to take more pride in these services. There is currently unrecognized potential for local persons to assist in these endeavors. Such persons, appear to be overlooked by current management practices, even though they contribute greatly in limited capacities to the communication towards park users.

Private initiatives such as those at Khao Sok National Park have proven to be highly successful and serve as models of excellence where appropriate for other protected areas in Thailand and south-east Asia. These programs have worked cooperatively with protected areas, locals persons, by incorporating proven communication methods, while maintaining a sensitivity to the local customs and knowledge.

Chapter 11

Summary of Thesis Results, Conclusions and Recommendations

11.1 Summary of Thesis

Protected areas in Thailand, had a wide variety of interpretive services for park users. These facilities and programs are recognized internationally as examples of quality, complimenting Thailand's progressive protected areas management strategy. Because of this achievement, and its influence on other countries, it was recognized that an evaluation of communication services, would reinforce and develop these to a higher degree.

Most of the protected areas investigated had some form of communication strategy in place. Visitor centers in particular, were well represented in the national park system. Other non-personal services such as signs and exhibits, were found in many protected areas, however few personal services were being implemented. Where personal service programs were being used (i.e.: day camps at DSNP), these invigorated the public relations staff, which demonstrated considerable enthusiasm towards the propagation of additional programs.

In our survey of 150 visitors in 9 protected areas in northern Thailand, visitor presented their perceptions towards park features. Park users considered natural beauty, and geological wonders as the most important features during their travels, while garbage, extrinsic developments, and poor interpretation, were the most common dislikes of visitors. While dislikes may have a negative contribution to visitations, enhanced interpretive programs focused on these, can mitigate these perceptions. Almost all (92.66%) of visitors considered gaining knowledge important to them during their visit. Most indicated their motivation to becoming informed was, to understand the site, while several users indicated the knowledge would be shared with others. Unfortunately, 31.00

% of those interviewed found the interpretive facilities contributed little educational value, and many park users indicated that they did not learn anything new during their visit.

Interpretive signs and trails were widely used by park users, however less than 50% of potential users, made use of other interpretive facilities, such as brochures, guides, and visitor centers. When they were used however, Thai persons generally found the facilities more useful than foreign travelers, who may have higher expectations. Visitors to protected areas commonly recommended an expanded availability of brochures and interpretive signage, but rarely suggested increasing personal services. This may in part be explained by a lack of previous exposure to personal services among Thai travelers. Foreign users may realize that a language barrier may limit any advantage in this service.

In contrast to visitor suggestions, professionals and staff in protected areas were of the opinion that personal services should be expanded to enhance communication strategies in protected areas. Many recommended increased training of students, for careers in interpretation. This concept was opposed by several individuals, who commented that trained guides would prefer to work for high priced private operators, rather than in low paying parks jobs. Certain professionals indicated that local persons may serve the personal communication needs of protected areas better than trained students. Local persons, may lack the academic training, however, they likely hold an attachment to the region, have traditional knowledge, and are less likely to depart to work in the larger tourist markets. A few pilot projects that were studied, demonstrated certain advantages to this strategy and should lead to an expansion of these activities.

Professionals also made many comments on the expanding environmental ethic in Thailand, and how this relates to interpretive services. Because protected areas have been in place in Thailand only since 1961, there has not been an established visitation tradition among many Thai travelers towards protected areas. Observations by researchers, support the comments by professionals, which indicated that a growing segment of Thai society, is becoming increasingly sensitized to the importance of wild areas. This is reflected in the

growing number of Thai birdwatchers, nature photographers, botanists, and general naturalists visiting these areas.

The perception of visitor behaviours, represented by officials and professionals was validated in a case study analysis of communication strategies in DINP. Behaviour of visitors mirror the measurable differences in the quality of presentation of certain exhibits. For example, signs which scored higher in 'reading ease' and 'human interest' were read by 36.62% of persons, in comparison to 21.95% of people at a less effective sign.

The use of the DINP summit visitor center, revealed much about the way in which its exhibits are communicating important park themes to the visiting public. Of the 247 people whose visits were timed, the mean stay was 4 minutes and 2 seconds. This represents only 18.06% of the average time it would take to read all of the information in the center. Almost a quarter of the Thai visitors left the center within a minute of entering, while not a single foreign was observed doing so. These results suggest that the design, content, or layout of the visitor center as a whole, is more effective at attracting and keeping foreign versus Thai travelers. There were, however, demonstrated exceptions to this relationship, when specific exhibits were analyzed. When the amount of use of each exhibits was determined, the results suggested that interactive exhibits held the visitor's attention for the greatest period of time. One exhibit in particular, held users on average 15.99% of their total time spent in the summit visitor center. This interactive display was exceedingly effective at attracting younger persons (below the age of 18), who spent nearly a quarter of their visitor center stay at this one exhibit. This interactive exhibit was noteworthy because users would often gather around it and share the information. When asked about the content of this exhibit at a later time, not one person indicated that they had forgotten the information. This is unlike other exhibits. Questions posed to users, based on non-interactive exhibits, were frequently incorrectly answered because the information was forgotten. The overall effectiveness of the exhibits at the visitor center was low, with eight exhibit-based questions being answered correctly by fewer than 50% of those exiting

the exhibit facility. This suggests that key information presented in exhibits is not being communicated effectively to park users.

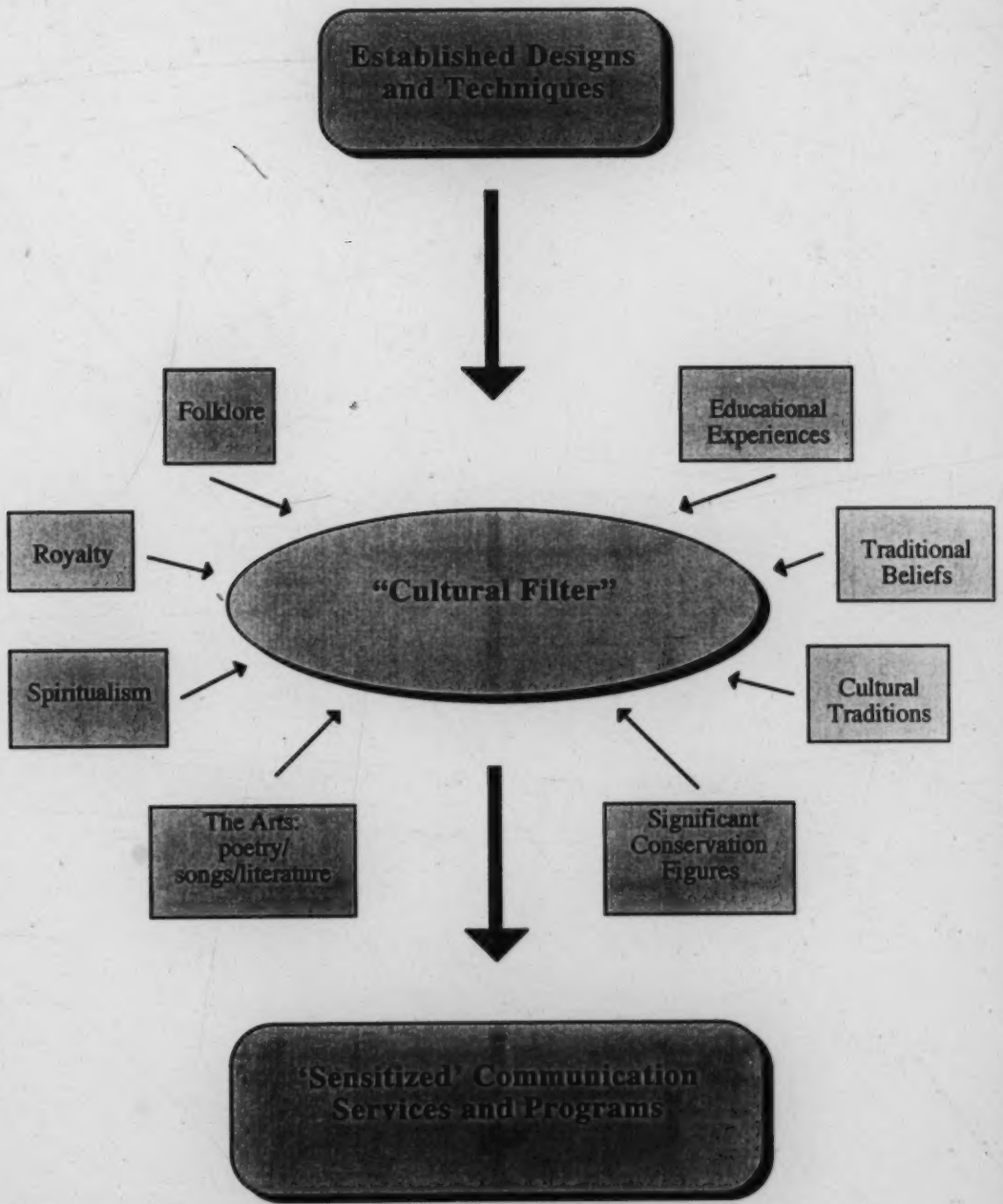
11.2 Implications of this Study

It is hoped that this study along with the assessment of ecotourism opportunities, conducted by Ian Sheldon (1999), in combination will lead to an enhancement of visitor experiences and opportunities in northern Thailand. These studies have analyzed the ecotourism and interpretive facilities and opportunities in greater detail than any previous study in this region, and should be very useful to managers to develop management plans in their protected areas. Additionally, the ecotourism and interpretation studies provide all protected area managers an overview of much of the northern region of Thailand, and therefore are valuable documents in designing a joint ecotourism and interpretation system plan. The framework provided by these reviews, should necessarily be enhanced by local participation. In particular, staff at Maejo University are in an excellent position to administer an all-encompassing systems plan, which would link the concepts and recommendation put forward in this document and Sheldon's. In short, these combined works, should serve northern Thailand's protected areas, by providing a foundation upon which future management decision concerning visitors services are based.

The process which I have termed 'Sensitizing Communication Services' (Figure 11.1) is what I believe to be the most effective manner in which to serve the interpretive needs of the public and protected area management in Thailand. Thai people were determined to hold very high reverence for cultural beliefs and traditions, which could be used to foster environmental ethics. Buddhism, folklore, and the monarchy all have underlying conservation themes which could be incorporated into effective programming. By linking complex conservation ideals, with recognizable features of culture, Thai visitors establish an immediate relationship with what is being presented. From this initial contact, more elaborate themes can evolve.

This approach would likely also benefit foreign users of these services, as the unique nature of the programming would be refreshing, and naturally contribute to an increased awareness of the country. By culturally sensitizing established strategies and services which have been proven successful elsewhere, the interpretive and communication strategies in protected areas of northern Thailand, should continue to serve as models for south-east Asia, and the world as a whole.

Figure 11.1: The Process of "Sensitizing Communication Services".



11.2: Recommendations:

The following is a list of 19 recommendations, to improve the quality and effectiveness of the communication services in protected areas in northern Thailand. Most recommendations are general, however some focus on specific topics. These specific suggestions may serve as models for other situations, as problems and solutions discussed are not unique to any one region

1. The royal forestry department should continue to build visitor centers and interpretive facilities throughout protected areas in Thailand. The design and location of the visitor centers should reflect a growing understanding of their purpose among Thai tourists, and a level of expectation among foreign travelers. Visitor centers must be designed so that they are the first place travelers stop once they have entered a protected area.
2. Existing services should be re-evaluated for content, appropriateness, excessive wear, and functionality of exhibits. Repairs and re-structuring should proceed along the guidelines outlined in this thesis. The levels of Human Interest and Reading Ease must improve significantly for interpretive signs to be effective. The text in these material should avoid technical language when possible, and invite participants into experiencing the story, first hand through the use of personal and action words.
3. Protected areas should continue to develop environmental education programs, and make use of existing amphitheaters and common gathering areas for evening programs such as campfire lectures, or environmental-oriented sing-a-longs. Environmental Education programs and the use of stories and sing-a-longs such as those developed at Doi Suthep-Pui NP should serve as models.
4. Visitor centers should be staffed with competent, professional and friendly officers, who are trained to approach travelers and assist them in a helpful and professional manner. Rangers should be encouraged to interact with visitors to protected areas.
5. An interpretive master plan must be completed for all protected areas in northern Thailand. This plan should indicate the agencies short-term and long-term objectives as

well as identifying the area's significant themes. By following a master plan the interpretive services in protected areas can be evaluated and improved in the future through the periodic assessment.

6. Non-personal services should be enhanced for the benefit of all protected areas users, in particular foreign travelers who may not be able to communicate effectively in the Thai language. Protected areas users, recommended an increased availability of brochures and pamphlets. Every person entering a protected area should have access to these publications.
7. Interpretive efforts should be made to include additional information on geology, wildlife, climate and first-hand activities, as these were experiences most favored by visitors to protected areas. Features such as garbage, which are disliked, can also be mitigated through expanded communication strategies.
8. Protected areas should establish facilities in which visitors can experience wildlife first-hand. Feeding stations, birdbaths, hides and canopy 'sky walks' may dismiss in the minds of many protected areas users the common belief 'that there are no more animals.'
9. Interpretive signs must achieve a higher degree of thematic integrity. This does not require that all signs be identical among parks, however their layout and style of the panel must become more consistent. The design of the sign structure should be consistent within the park, possibly representing the park's regional character in design. National park logos and appropriate illustrations, would contribute greatly to the professionalism and consistency of these signs.
10. The Angka bog trail in DINP, would be best served if permanent signs were in place. The high traffic would probably make it economically more viable to construct signs as opposed to the current brochure based interpretive trail. If this proves impossible, brochures should be made available in a rain resistant box at the trail head. To offset

the cost of printing, a donation box could be set-up alongside with a suggested donation. Text and design should follow guidelines established in chapters 1, 2 and 7.

11. To increase the amount of time users spend in the visitor center, managers should restructure the exhibits to maximize their effectiveness. Fazio and Gilbert (1986) have termed this effectiveness, the "A,B,C's" of exhibit design: A= Attractive; B= Brief; C= Clear. A good interpretive sign is one that communicates a theme to every viewer. To do this the exhibit must capture and hold a person's attention long enough for the theme to be recognized and understood.
12. Visitor centers layout and design should be re-evaluated to correspond with the preferences of visitors. Exhibits near the entrance of the visitor center tend to attract a disproportionate amount of the user's time. As such, the entrance and exit of the visitor center are primary focal points for the protected area's, most important themes. Exhibits positioned at these areas should contain brief messages which encourage users to engage in the remanding exhibits without creating congestion. A diversity of styles should be maintained in the exhibits. Different age classes show a preference for a diversity of exhibit styles. Younger tourists (0-20 years) tend to show a preference to interactive exhibits, and exhibits features real object. Seniors (61+ years) may show a preference to historical exhibits, and may be more interested with text-based exhibits. Exhibits which require some staff involvement should be monitored periodically.
13. Interactive exhibits should be improved and expanded in the DINP summit visitor center. These exhibits are among the most popular and effective at communicating information which is retained by park users.
14. Management of protected areas should realize the different experiences that foreign and Thai visitors bring to protected areas. These differences should be used to enhance the effectiveness of services, by elaborating on experiences that these user groups bring with them to the park.

15. Management of the protected areas should strive to establish a greater profile for species such as the green-tailed sunbird in DINP. This endemic species is extremely attractive, ecologically significant, and easily seen by visitors who visit the summit of the national park. Minimally, an interpretive sign, featuring a large illustration of the green-tailed sunbird, and short meaningful text should be erected near the entrance of the summit visitor center. The flowering hedge that forms the perimeter of the visitor center's entrance is the best place in the world in which to observe this species, and just about any visitor made aware of this species, should be able to meet one. Concepts such as endemism, conservation, ecotourism, and forest communities can all be interpreted through this species.
16. Protected area managers should attend interpretive training sessions along with junior staff members. As management hierarchy in Thai protected areas in a top down structure, in order for an environmental education objective to proceed, it must be supported by senior protected area managers.
17. Protected areas should not rely so much on foreign volunteers in the design of interpretive facilities. By establishing working groups which involves both foreigners and existing park staff, the interpretive facilities will benefit from the this merged approach. Foreign volunteer may contribute in the design, style and expertise, while the involvement of local staff will instill regionalization, and pride in the facilities. These should assure the ongoing maintenance of the programs after the departure of the foreign volunteers.
18. National park management should not hesitate to hire local persons in interpretive and communication duties. These persons often have a vast knowledge of the area, and can contribute greatly to the awareness of the region's unique features. Training will be required in many cases to build communication skills and confidence. Locals with skills and interest in natural history and communication should be given priority in these positions. Protected areas should also recognize existing staff, which

demonstrate skill and knowledge in communications. Managers should direct employees into appropriate positions, which would maximize the talents of individual staff.

19. Managers of protected areas should target Thai users of visitor center, through specific cultural, spiritual, and historical themes which have shown to be linked to Thai culture. By using Buddhism, Royalty, and environmental martyrs such as Dr. Boonsong Lekagul, and Seub Nakasatien Thai people can begin to forge a connection to conservation. Using interpretation-based on Thai values and stories, the level of interest and participation would also be raised among foreigners, who would be attracted to the 'unique' approach in communicating these values.

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Appendix A:

Checklist of Interpretive Services in Protected Area in Northern Thailand

Inventory

Protected Area _____

Date _____ Reasearcher_____

Visitor Center/Information Staff

__ Professional uniformed Appearance
__ Respond immediately
__ Anticipated questions
__ Alert visitors to "can't miss" features
__ Friendly/ warm body language
__ Focuses attention on guest
__ Interprets rules
__ Pamphlets and brochures

Visitor Center -Exhibits

__ Variety in styles
__ No advertisements or public promotions
__ No vandalism or substantial wear
__ Correct/ factual information
__ Updates and current information
__ Obvious themes
__ All appropriate objects
__ No contradiction in information
__ Actual objects
__ Satellite exhibits

Visitor Center- Available Information

__ Visitor options in park
__ Preservation of park's resources
__ Visitor orientation
__ Interpretive programs
__ Park's story and facts
__ Surrounding rec'l opportunities
__ Personal needs (accommodation, medical services, groceries)

Appendix B:

Inventory of Interpretive services and materials available in Protected Areas in Northern Thailand.

Protected Area _____ **Date**_____

Signs

	Interpretive Signs	
	Directional signs	
	TAT sign	
	Trail Head signs	
	Rules of conduct	
	Tree labels	
	Wise Signs	
	Park Map	

Published materials

	Park Brochure	
	Bird Checklist	
	Other checklists	
	Other printed(maps, etc.)	

Infrastructure

	Amphitheater / Stage	
	Interpretive Trail	
	Viewing platforms /hides	

Programs

	EE extension programs	
	On site EE programs	
	Evening programs	

Appendix C:

Survey Instrument

Ecotourism Potentials and Opportunities in Northern Thailand:

A Perceptional Evaluation and Assessment of Ecotourism Opportunities, Presentation and Communication Strategies

We are both students from the University of Alberta in Canada. With the permission of the National Research Council of Thailand, we are conducting a study with Maejo University to determine your attitudes and perceptions on the availability of ecotourism activities. Your opinions will make an important contribution to the understanding and improvement of ecotourism opportunities in the region. With your permission we would like to ask you a few questions to assess this form of tourism in Northern Thailand; this may last up to thirty minutes.

No. _____

Date: _____

Time: _____

Location: _____

1: What do you think is meant by the term ecotourism?

_____

_____

_____

_____

There are many different opinions on the meaning of ecotourism. For this study we define ecotourism as a form of tourism for experiencing wildlife and natural features - this allows tourism to play an expanding role in their protection and conservation.

2: What is your main reason for coming to this attraction?

_____

_____

3: How did you find out about this place?

_____

_____

4: how did you get here? motorcycle bus

private car guided tour

other rental car hitch hike

5: What have you had time to see in this area?

_____

_____

_____

6: What else will you be going to see during your trip here?

_____

_____

_____

7: Is there any other place in Northern Thailand you would like to see, and why?

_____

_____

_____

8: How did you find out about this attraction that you mention?

_____

_____

_____

9: What has been your main source of information for this region?

_____

10: How well were the natural features presented in the various information sources that you have used?

1 - Very well
2 - Well
3 - No opinion
4 - Poor
5 - Very poor

11: During your travels in Northern Thailand, how important are each of these attractions to you?

1 - Very important
2 - Important
3 - No opinion
4 - Unimportant
5 - Very unimportant

Natural beauty	1	2	3	4	5
Geological sites	1	2	3	4	5
Wild flowers	1	2	3	4	5

Birds	1	2	3	4	5

Other wild animals	1	2	3	4	5

Wildlife viewing in general	1	2	3	4	5

Cultural or sacred sites	1	2	3	4	5

12: What are your comments on the facilities and access for seeing any of the above?

_____

_____

_____

13: How important are the following cultural or sacred sites to you?

1 - Very important
2 - Important
3 - No opinion
4 - Unimportant
5 - Very unimportant

Hill tribes	1	2	3	4	5
Temples	1	2	3	4	5
Cuisine	1	2	3	4	5
Festivals	1	2	3	4	5
Arts and Drama	1	2	3	4	5
Meeting local people	1	2	3	4	5
Shopping	1	2	3	4	5
Other…..	1	2	3	4	5

14: Can you describe the most favourite natural experience you have had here in Northern Thailand? Why was this your most favorite experience?

_____

_____

_____

15: Which natural features do you think are <u>not</u> well celebrated or advertized in this area?

_____

_____

_____

16: Have you been here before? _____

If Yes, how many times? _____

17: Do you think you will come here again? Why?

_____

_____

18: Of all the attractions you have been to here in Northern Thailand, what would you have liked to know more about?

_____

_____

_____

19: Do you think that prior knowledge of these attractions would improve your experience here? (Y/N) How?

_____

_____

_____

20: If you could come here again, which time of the year would you prefer to come, and why?

_____

_____

_____

21: What did you most enjoy about this attraction?

_____

_____

_____

22: Do you have any criticisms or dislikes about this attraction?

_____

_____

_____

23: Can you suggest ways in which it might be done differently?

_____

_____

_____

24: How much ecotourism potential do you think Northern Thailand has in the future?

1 Very high
2 High
3 No opinion
4 Low
5 Very low

25: How would you rate the ecotourism activities available to you today? Why?

1 Very good
2 Good
3 No opinion
4 Poor
5 Very Poor

26: Do you think ecotourism will truly benefit Northern Thailand? ± How?

_____

_____

_____

27: Is gaining knowledge important to you during your visit? Why?

_____

_____

_____

28: During your visit, did you use the following? If yes, were they useful?

	Booklets/ brochures	1	2	3	4	5
	Interpretive Signs	1	2	3	4	5
	Hired Guides	1	2	3	4	5
	Scheduled Tours	1	2	3	4	5
	Visitor Centres	1	2	3	4	5
	Slide Shows	1	2	3	4	5
	Checklists	1	2	3	4	5
	Trails	1	2	3	4	5
	Rangers/Interpreters	1	2	3	4	5
	Other (Please describe)	1	2	3	4	5

29: How do you feel that these contributed to your visit?

30: What was the most significant thing you learned about Nature here?

_____

_____

_____

31: How would you improve the presentation of information?

_____

_____

_____

32: How well do you understand this place?
1 Very well
2 Well
3 No Opinion
4 A little
5 Not at all

To finish up, we would just like to ask you a few questions about yourself.

33: Male/Female

34: What is your nationality _____

35: In which town and country do you live? _____

30: What is your occupation? _____

31: What is your highest level of education? _____

32: In which year were you born? _____

33: Ecotourist/Tourist (delete as appropriate)

Appendix D:

Duration of Visits to the summit Visitor Center at DINP

Date:_____Time:_____

Number:	
M/F	Age:
Thai:	Foreign:
In:	
Out:	
Total:	

Appendix E:

Answer Sheet:

Evaluation of Interpretive Exhibits at the Summit Visitor Center DINP.

Date:_____ Time:_____

No.	M/F	Age:	No.	M/F	Age:	No.	M/F	Age:
	Thai	Foreign		Thai	Foreign		Thai	Foreign
	Time (approx)			Time (approx)			Time (approx)	
	Yes	No		Yes	No		Yes	No
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
Total			Total			Total		

No.	M/F	Age:	No.	M/F	Age:	No.	M/F	Age:
	Thai	Foreign		Thai	Foreign		Thai	Foreign
	Time (approx)			Time (approx)			Time (approx)	
	Yes	No		Yes	No		Yes	No
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
Total			Total			Total		

No.	M/F	Age:	No.	M/F	Age:	No.	M/F	Age:
	Thai	Foreign		Thai	Foreign		Thai	Foreign
	Time (approx)			Time (approx)			Time (approx)	
	Yes	No		Yes	No		Yes	No
1			1			1		
2			2			2		
3			3			3		
4			4			4		
5			5			5		
6			6			6		
7			7			7		
8			8			8		
9			9			9		
10			10			10		
Total			Total			Total		

Plate 1: Signs

Photo 1a: TAT sign at Ob Luang national park. All TAT signs showed the highest degree of thematic intergrity, and material quality among all signs encountered in Thailand's Protected Areas.

Photo 1b: Main Entrance sign in Ob Luang national park. This sign was typical of national park entrance signs, which indicated to visitors that they have arrived at a special place.

Photo 1c: Directional signage in Jae Sorn national park. These inexpensive handmade signs, effectively provide direction to all park users. The symbols follow recognized international standards.

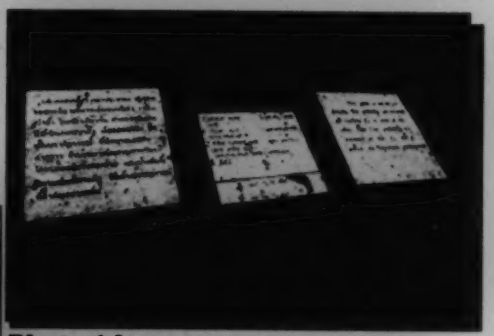

Photo 1d: Interpretive signs at the mouth of the cave at Tham Lod ERDC. The manager at the site requested assistance of the research team to develop more effective signage, which has since been put into place.

Plate 2: Signs II

Photo 2a: An example of a 'Wise Sign'. Content is inspirational in nature. Sign reads: "Take Nothing But Pictures, Leave Nothing But Footprints on Path, Kill Nothing But Time."

Photo 2b: Effective Interpretation signage in Ob Luang national park. Note the combination of illustration and text. This sign is positionned below the prehistoric painting depicted on the sign.

Photo 2c: A couple sharing time at an interpretive sign in Ob Luang national park.

Photo 2d: Ineffective signage in Doi Inthanon national park. Designed with the intent of accompagnying pamphlets, this sign yield no information or relevation as a stand alone feature.

Plate 3: Interpretive Services

Photo 3a: Examples of brochures and pamphletes available in national parks and protected areas.

Photo 3c: Visitor Center in Ob Luang national park. This visitor center was constructed in 1996. It had the highest quality of interpretive exhibits encountered during the study.

Photo 3d: The Outdoor Stage in Doi Khuntang national park. Only one other national park investigated had an outdoor stage or amphitheater. Neither of these were being used for interpretive presentations. This facility served as a gathering place for tourists to the park, and one camper was seen tenting in the middle of the facility.

Photo 3b: Exhibit #4 in the Doi Inthanon summit visitor center. This interactive display, featuring questions when the doors were closed, and answers when opened, was the most effective display encountered in protected areas. Visitors spend comsiderable time at this exhibit, and retained much of the information which was presented.

Plate 4: Environmental Ethics

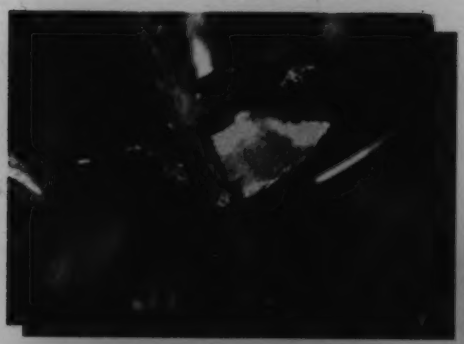

Photo 4a: The Green-tailed Sunbird is endemic to Doi Inthanon national park. In spite of this, it is easily encountered around the summit visitor center, and is the most sought after bird in the park. Less than 17% of visitors to the park were capable of correctly identifying a photograph of this species.

Photo 4c: This visitor to a 'Snake Farm' is feeding a captive Gibbon. Such behaviour mirror the conservation ethic in Thailand, which continually evolves, towards a greater appreciation of intrinsic natural values.

Photo 4b: Garbage is commonly seen throughout high traffic areas of protected areas in Thailand. Visitors indicated that this was one of their most serious dislikes about Thailand's parks. Current disposal habits, are based upon past traditions, whereby much of the waste products were decomposable. Many suggest that garbage problems are to be resolved using education campaigns.

Plate 5: Research Methods

Photo 5a: The survey instrument was administered by one of the two principal researchers, and a Thai translator. One hundred and fifty interviews were conducted.

Photo 5b&c: Visitors were asked upon leaving the summit visitor center in DINP, a series of questions pertaining to the exhibits. Most visitors were unable to answer these correctly, suggesting that many of the exhibits ineffectively communicate the park's theme.

Plate 6: Elements of Thai Environmentalism

Photo 6a: Certain species of wildlife such as elephants have a high reverence in Thai society. Note the polished heads of these elephants, a result of people respectfully touching their heads.

Photo 6c: Buddhist precepts acknowledges the spiritual component in nature. Trees wearing robes are protected from being cut, because of adherence to Buddhist law.

Photo 6b: Environmental martyr, Seub Nakasathien is celebrated throughout Thailand in folklore, songs, and environmental organizations. This T-shirt, featuring Seub, is worn with pride at a 'Green Day' celebration at Maejo University.

Photo 6d: Wildlife photographers, such as this man at DINP, demonstrate an expanding environmental ethic in Thailand. Increasingly, Thai travelers are seeking out wildlife and natural areas.